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T R A V E L S
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S W I T Z E R L A N D.

I N A
S E R I E S O F L E T T E R S

T O
W I L L I A M M E L M O T H, E S Q.

F R O M

W I L L I A M C O X E, M. A. F. R. S. F. A. S.

Rector of BEMERTON; Member of the Imperial Oeconomical
Society at ST. PETERSBURGH, of the Royal Academy of
Sciences at COPENHAGEN, and Chaplain to His
Grace the DUKE of MARLBOROUGH.

I N T H R E E V O L U M E S.

V O L. II.

L O N D O N:

P R I N T E D F O R T. C A D E L L, I N T H E S T R A N D.

1789.

7

Jo: Banks

Nature! great parent! whose unceasing hand
Rolls round the seasons of the changeul year,
How mighty, how majestic are thy works!
With what a pleasing dread they swell the soul!

THOMSON'S SEASONS. Winter, Ver. 105.

T O

SAMUEL WHITBREAD, Esq. M.P.

S I R,

AS the opportunity of revising and augmenting this part of my Letters on Switzerland, and of rendering them more worthy of public inspection, was entirely owing to the honour of accompanying your Son upon his Travels, to you I beg leave to inscribe this Second Volume, as a public mark of that esteem and regard, with which I am,

S I R,

Your most obedient,

and obliged humble servant,

W^m COXE.

18
SAMUEL WINTERBURN, M.P.

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A
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218
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W. COX

MAPS AND PLATES

IN THE

SECOND VOLUME.

1. **M**AP of MONT BLANC and the circum-jacent ALPS: from *Carte de la partie des Alpes qui avoisine le Mont Blanc*; delineated by M. Pictet Turetini, professor of philosophy at Geneva, and inserted in the second volume of M. de Saussure's "*Voyages aux Alpes*." The heights have been reduced from French to English measure; and the roads, foot-paths, and tracks, have been added to the original, on the authority of M. Pictet himself.

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2. FIGURE of the BOUQUETIN, from Ridinger's "*Abbildung der Jagtbaren Thiere*."

HEAD and HORNS of a Male BOUQUETIN, aged two years; communicated by M. Van Berchem.

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4. View of the CHAIN of ALPS and HILLS, as seen from the environs of Berne.

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OF THE

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CONFIDENTIAL

1. The purpose of this document is to provide a comprehensive overview of the current state of the project and to identify the key areas for improvement.

2. The project has been initiated in order to address the growing need for a more efficient and effective system of data management.

3. The initial phase of the project has been completed, and the results have been analyzed. The findings indicate that there is a significant need for a more robust and secure system.

4. The next phase of the project will involve the development of a new system that will meet the requirements of the project and provide a more efficient and effective means of data management.

5. The project is currently in the planning stage, and the next steps will be to develop a detailed project plan and to begin the implementation of the new system.

6. The project is expected to be completed by the end of the year, and the results will be evaluated to determine the effectiveness of the new system.

7. The project is a high priority, and it is essential that the project be completed on time and within budget.

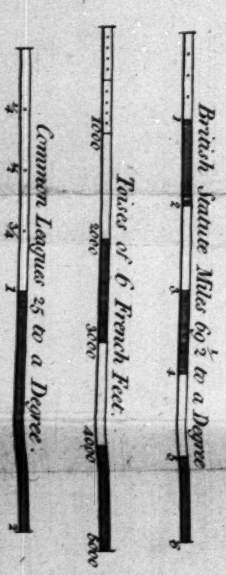
8. The project is a complex task, and it is essential that the project be managed effectively to ensure the successful completion of the project.

9. The project is a critical component of the overall strategy, and it is essential that the project be completed on time and within budget.

10. The project is a key element of the overall strategy, and it is essential that the project be completed on time and within budget.

of the principal places mentioned
in this Map above the Mediterranean
in French & English Measure

	Feet	Fathoms
Mont Blanc	2426-4526	
Aiguille d'Argentière	1902-2213	
Mont Velan	1722-2021	
Mont Buet	1579-1026	
Crémont	1403-8979	
Glacier of Tignes	1334-8538	
Mont Breven	1306-8558	
Col de la Seigne	1263-8083	
Crête du Bon Homme	1255-8032	
Convent of St Bernard	1251-8006	
Col Ferret	1195-7648	
Col de Balme	1181-7558	
Montanvert	954-6106	
Courmayeur	65-4000	
de Priory	534-3354	



25 Longitude East of Geneva. 30

35 40

45

50

55

1

5

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the Adjacent
ALPS.

W. Palmer sculp, Lexington.

Extensive Glaciers
of Thermotane
or Hautema

Altitudes

of the principal places mentioned

LETTERS, &c.

LETTER 38.

Excursion towards the Summit of the Couvercle.

IN my subsequent expedition to the valley of Chamouny, I had proposed passing my course still further towards the glacier of Talefre, but particularly to the Couvercle, of which I had read a very curious description in Mr. de Saussure's work. But having hurt my foot in my ascent to the Montanvert, I was prevented from executing my intended purpose. You will, however, have no reason to regret my disappointment, on receiving the following account of that expedition, extracted from notes communicated by a friend.

We quitted the Priory at six in the morning, accompanied by Michael Paccard and Marie Coutet, two guides of Chamouny. We traversed the plain, and ascended the Montanvert through a wood of pines. We had fine views of the glacier which gives rise to the Arveron, and of the vale of Chamouny, chequered in a most singular manner with alternate rows of arable and pasture land. After continuing about an hour, we quitted our mules, proceeded on foot, and in about an hour and a half reached Blair's Hut, on the top of the Montanvert, where we rested for a few minutes.

We then descended to the glacier, coasted it by the path of the chrystal hunters, and in about half an hour came to some difficult passes called *Les Ponts*, or the Bridges, which run over a perpendicular rock, at the edge of a frightful precipice. These passages, though still difficult, were extremely dangerous, until, by order of M. de Saussure, the rock was in some parts blown away with gunpowder, and small holes formed for the hands and feet. The first bridge was about forty paces in length, and the two other passes somewhat less difficult, of about ten paces each. In about a quarter of an hour we arrived at a fountain which drops from the roof and

and sides of a natural grotto, the inside whereof is overgrown with large tufts of the *Ranunculus glacialis*. Having walked about eight miles since our departure from Chamouny, we sat down in this sequestered grotto, and made our first repast.

From hence we crossed some snow, the remains of a last winter's *Avalanche*, and immediately got upon the *Moraine*, the term given to the stones and earth which the glaciers disgorge on each side, after having received them from the superimpending mountains: they are very treacherous and difficult to walk upon. The ice upon which these stones rest is more hard and elevated than that of the rest of the glacier; and the earth is laid in such regular and equable heaps, as to give the appearance of art. As we looked from hence over the valley of ice, it seemed impracticable; so numerous and broad were the chasms which intersected it in every direction, many bearing a tremendous appearance, and of an astonishing depth: but we soon found that it only required courage and activity. Instead of *crampons*, we had large nails in our shoes, which more effectually answered our purpose, and our spiked sticks were on this occasion particularly serviceable. Having descended upon the glacier, we found the ice softened by a warm wind, which

rendered it less slippery than usual. We continued along it about a quarter of an hour, then regained and walked along the Moraine near half an hour. We now embarked upon the great valley of ice called *Glacier des Bois*, I own not without emotion to see ourselves upon this extraordinary desert, broken into frightful chasms, through the maze of which we were to pass. It was curious to observe the numerous little rills produced by the collection of drops occasioned by the thawing of the ice on the upper part of the glacier: these little rills hollow out small channels, and torrent-like precipitate themselves into the chasms with a violent noise; increasing the body of waters formed by the melting of the interior surface, and finding an outlet under the immense arch of ice in the valley of Chamouny, from which the Arveron rushes. This ice-water was agreeable to the palate, and extremely refreshing from its coolness.

The field of ice, which at first sight seemed impervious to all but the chamois and marmot, and scarcely practicable even for the daring footsteps of man, is traversed by flocks of sheep, driven to the scanty pasturage which the opposite rocks afford. The shepherds leave them in these desolate spots, and visit them at different intervals. We traced their track over the ice, and
saw

saw a flock returning. One shepherd preceded as a guide, and another followed the herd. We had the good fortune to preserve one sheep which had strayed from the flock.

As we were continuing our course, we were surprised by a loud noise; and, looking round, perceived a large fragment of rock which had detached itself from one of the highest needles; it bounded from precipice to precipice with great rapidity, and, before it reached the bottom, was dissolved almost entirely into dust. Having proceeded about an hour, we were astonished with a view far more magnificent than imagination can conceive: hitherto the glaciers had scarcely answered my expectations, but now they far surpassed them. Nature had clad herself in all her terrors. Before us was a valley of ice twenty miles in extent, bounded by a circular glacier of pure unbroken snow, called Takul, which leads directly to the foot of Mont Blanc, and is surrounded by large conical rocks, terminating in sharp points like the towers of an ancient fortification; to the right rose a range of magnificent peaks, their intervals filled with glaciers; and far above the rest, the majestic summit of Mont Blanc, his highest point obscured with clouds. He appeared of such immense magnitude, that at his presence the circumjacent mountains, however gigantic,

seemed to shrink before him, and "*bide their diminished heads* *." In half an hour we arrived at the Moraine, which forms a boundary of the valley, crossed it, and proceeded upon a body of ice about three quarters of a mile broad. Here the ice was more even and free from chasms than in the great valley. We then passed a second Moraine, and beyond that another mass of ice to a third Moraine: descending from thence, we came upon the last ridge of ice, broader considerably than the two former, and full of large chasms: it is separated from the rock only by a very narrow Moraine. These Morains contain great quantities of chrystal.

Here we turned a little to the right, and ascended the valley of ice, the scene every moment increasing in magnificence and horror. In a short time we arrived at the foot of the Couvercle, having walked about six miles on the ice. We now found it difficult to quit the ice; and the first part of the descent was really perilous. One step was truly dreadful: a bulging rock entirely smooth, and presenting a precipice of very considerable depth, which was terminated by an immense crevice in the ice, seemed to forbid our progress: a small hollow, however, in the middle served for one foot, and from thence we

* Milton.

Excursion to the Couvercle.

7

bounded over to the firm ground. One guide went first, and held out his hand on the opposite side, whilst the other helped and directed us where to place our feet. We continued mounting along a path which now seemed without danger, though very narrow and steep, and carried along the ridge of precipices. The scenery around was indeed so sublime as to banish all ideas of fatigue and apprehension. Half an hour more brought us to the side of a fountain, where we sat down to our dinner. We had now employed five hours and a half from Chamouny, and notwithstanding all difficulties and necessary halts, had walked fifteen miles, but none of us complained of fatigue.

The clouds beginning to gather, warned us to hasten to the top of the Couvercle. From that station we had the view of three stupendous valleys of ice, the glacier of Talefre to the left, in front that of l'Echaut, and the Takul to the right; all uniting in one great valley of ice called the *Glacier des Bois*, which stretched under our feet, and was surrounded and ornamented by the rugged needles.

The dead silence, which reigned in this place, was only interrupted by the bounding of distant chamois, and the cries of alarm which the marmots gave to their tribes at our approach.

Having refreshed ourselves, we proceeded to the top of the Couvercle, a most extraordinary rock: it has the appearance of a large irregular multilateral building placed on a mountain. The rock is granite, the ascent was laborious, but perfectly secure. Towards its foot we found a bottle containing the names of two Englishmen who had reached that place about a fortnight before, and probably flattered themselves that no stranger would go beyond them. We wrote our names on the reverse of the paper, and carried the bottle with us to the summit of the Couvercle. Three quarters of an hour brought us to the point, and we reached a rock overhanging a precipice which my eyes dared not measure. In this situation we were surprised with a thunder storm, which added great horror and magnificence to the scene. We took shelter under an impending rock, and listened to the roaring of the storm with a mixed sensation of fear and pleasure. On reflecting in this place that we were to measure back the same ground, and to undergo a repetition of the same difficulties, we were not exempted from alarm; but recollecting that it is the duty of man to encounter some dangers, in order to behold such glorious scenes, we from that moment banished all apprehensions

Our

Our view from the top of the Couvercle comprehended the same sublime scenes we had enjoyed from its base, but considerably heightened and enlarged; and the stupendous extent of ice appeared like a rugged expanse of frozen sea, bounded by the most gigantic rocks, and terminated by Mont Blanc, the Atlas of the globe.

Although we were thus entirely enclosed between ice and snow, and barren crags, where all vegetation might be supposed to cease; yet our eyes reposed on a triangular rock, clothed with grass and alpine plants, and starting up like a fertile island in the midst of a desolate ocean. It is known by the name of the *Garden*, and exhibits a curious contrast to the surrounding dreariness.

During our expeditions into the Alps, we had frequently found occasion to remark the peculiarly deep shade of the blue colour in the "*pure Empyrean*"; and to-day we were more particularly affected with this circumstance. It conveyed a most sublime idea of the infinity of space: the higher we ascended, the more beautiful it seemed; and we were informed by a person accustomed to alpine scenes, that on considerable elevation

* Milton.

he had frequently observed the stars at noon-day.

Our descent from these icy regions was no less fortunate than our ascent; we reached the Priory at seven in the afternoon, without the least accident, and wrapt in astonishment on the recollection of scenes, which surpass the imagination, as much as they defy description.

I am, &c.

L E T T E R 39.

Various attempts to reach the summit of Mont Blanc—Successful Expedition of James Balma and Dr. Paccard—Of Monsieur de Saussure—His physical Observations.

VARIOUS attempts having been made to reach the summit of Mont Blanc, as well by the guides of Chamouny, as by Messieurs de Saussure and Bourrit; a chronological account of the principal expeditions, which have at length terminated successfully, will not, perhaps, be uninteresting.

The

The first enterprize was formed by Mr. Couteran and three guides of Chamouny, Michael Paccard, Victor Tiffay, and Marie Coutet. On the thirteenth of July 1776, these adventurers set off from the Priory about eleven in the evening. They passed between the glaciers of Bosson and Tacona; and after having employed above fourteen hours in mounting rugged and dangerous ascents, in crossing several vallies of ice, and large plains of snow, they found themselves upon the top next to Mont Blanc. At first sight, it appeared scarcely a league distant; but they soon discovered that the clearness of the air, the extraordinary whiteness of the snow, and its great height, made it seem nearer than it was in reality: and they perceived with regret, that it would require at least four hours more to reach the summit, even supposing it practicable. But as the day was far advanced, and the vapours towards the summit of Mont Blanc began to gather into clouds, they were obliged to relinquish their enterprize. As they were returning in great haste, one of the party slipped in attempting to leap over a chasm of ice. He held in his hand a long pole, spiked with iron, which he struck into the ice; and upon this he hung dreadfully suspended for a few moments, until he was released by his companions.

panions. The danger he had just escaped, made such an impression upon him, that he fainted away, and continued for some time in that situation: he was at length brought to himself, and, though considerably bruised, sufficiently recovered to be able to continue his journey. They arrived at Chamouny about eight that evening, after having employed two and twenty hours: as some sort of recompence for so much fatigue, they enjoy the satisfaction, at least, of having approached nearer to Mont Blanc than any former adventurers.

According to Sir George Schuckborough, the summit to which they arrived, is more than 13,000 feet above the Mediterranean. These persons, however, did not take the necessary precautions for so perilous an enterprize: for the expedition was not only extremely hazardous, but was also far too fatiguing and difficult to be accomplished within twenty-four hours. They ought to have set out in the morning, and to have found some proper place in which they might pass the night; they would then have been sufficiently refreshed the next morning to pursue their expedition; and would not have found themselves, after advancing within four hours of Mont Blanc, unable to proceed, and in danger of being overtaken by darkness in so dreary

dreary a situation. The failure of this expedition seemed for some time to repress all future attempts to attain the top of Mont Blanc, until the indefatigable Mons. Bourrit infused a new spirit into the inhabitants of Chamouny. After reiterated though unsuccessful attempts, on the 11th of September 1784, Mr. Bourrit, accompanied by six guides, departed from Bionnassay; and was *scaling*, as he expresses himself, the *rampart* of Mont Blanc, when he suddenly found himself so extremely affected by the intense cold, that he was unable to proceed.

Marie Coutet and Francis Guidet, two of the guides who attended him in this expedition, had preceded their company, and ascended to the Dome of Goutè, which is about 9,400 feet in a strait horizontal direction from the summit. Marie Coutet informed me, that they passed the Middle Dome, and walked along the ridge between that dome and the summit as far as some high rocks, which appear from the vale of Chamouny like small points rising out of the snow; but night approaching, obliged them to return.

On the 4th of September 1785, Marie Coutet and James Lambat reached a place under a rock at a considerable elevation, where they passed the night: setting off before sun-rise, found

found themselves about seven on the Dome of Goutè : and were proceeding towards the summit, with a fair prospect of success, when a violent storm of hail ensued, accompanied with such a strong wind, as compelled them to return.

On the 13th of September, Messieurs de Saussure and Bourrit, attended by twelve guides well provided with barometers, thermometers, and other instruments, for the purpose of making the necessary observations, departed from Bionafay, and arrived at a hut, which they had ordered to be constructed at *Pierre Ronde* 7,808 feet above the level of the sea. Here they passed the night, and early the next morning reached the Dome of Goutè without the least accident, and without much difficulty ; where they were stopped by a fresh fall of snow, into which they sunk so deep, that all further progress was impracticable.

Mr. de Saussure informs us, that the mercury in the barometer sunk eighteen inches and a half, and that he reached an elevation of 1,290 toises, or 8,256 English feet.

At length, in July 1786, six guides of Chamouny having failed in another attempt, James Balma, one of the company, being overtaken by darkness, as he was rambling upon the ice,
missed

missed his way, and passed the night in a spot above the Dome of Goutè, elevated more than 12,000 feet above the level of the sea. His youth, and the strength of his constitution, having preserved him from the effects of the nocturnal cold in so severe an atmosphere, at the approach of morn he reconnoitred the situation, and observed a part which appeared to him more easy of access than any of the others that had been hitherto attempted.

On his arrival at Chamouny he was seized with a very severe indisposition, the effect of extreme fatigue, and of the intense cold. Being attended by doctor Paccard, a physician of the place, James Balma communicated his observations; and, in gratitude for his attendance, offered to conduct him to the summit of Mont Blanc.

On the 7th of August, these two daring adventurers sallied from Chamouny upon this memorable expedition, and reached before dark the mountain of *La Cote*, which overhangs the upper part of the glacier of Bosson. Here they passed the night; and at three in the morning pursued their route over the ice, ascended the Dome of Goutè, passed under the Middle Dome, and at the last pyramid of rock turned to the east, and continued along the ridge, which is

seen

seen from Geneva, and lies on the left of the summit. Here they first began to experience such intense cold, and such extreme fatigue, that Dr. Paccard was almost induced to relinquish the enterprize: being, however, encouraged by James Balma, more accustomed to such fatiguing and dangerous expeditions, he followed his companion. The wind was so violent and piercing, that in order to avoid its blowing in their faces, they were obliged to walk sideways for a considerable time. About six in the afternoon, they at length attained the summit of Mont Blanc; and stood triumphantly on a spot of ground, which no one had reached before, and at the elevation of 15,662 feet above the sea, which is undoubtedly the highest point in the antient globe. They remained on the summit no more than half an hour, the cold being so intense, that the provision was frozen in their pockets, the ink congeled in their inkhorns; and the mercury in Fahrenheit's thermometer sunk to $18\frac{1}{2}$ degrees. Doctor Paccard had just time to observe the state of the barometer, which he has not communicated to the public.

They had employed fifteen hours in ascending; and though they again reached the mountain of La Cote in five hours, yet they found great difficulty

ficulty in descending, their sight being debilitated by the reflection from the snow. They arrived at La Cote about midnight, after twenty hours unremitted fatigue. Having reposed themselves two hours, they again sallied forth, and returned to Chamouny at eight in the morning. Their faces were excoriated, and their lips exceedingly swelled; Dr. Paccard was almost blind, and his eyes continued to be affected for a considerable time.

We cannot expect any accurate experiments from these two persons, to whom the glory of having first ascended the summit of Mont Blanc is undoubtedly due. But they prepared the way for the observations and discoveries of future naturalists, and particularly of M. de Saussure, whose indefatigable zeal did not permit him to rest, until he had reached the top of Mont Blanc, and made those experiments which cannot fail greatly to elucidate the theory of the atmosphere.

That able naturalist set out on this successful expedition, from the valley of Chamouny, on the 13th of August, 1787. He was accompanied by eighteen guides, who carried a tent, matraffes, all necessary accommodations, and instruments of experimental philosophy. They passed the first night on the top of the mountain of La Cote,

in a hut previously constructed for that purpose. At four o'clock in the following afternoon they reached an elevation of 9,312 feet above the priory, or 12,762 above the level of the sea. Here they encamped, and formed an excavation in the congeled snow, which they covered with a tent. In this icy habitation, instead of suffering from the cold, M. de Saussure felt such a suffocating heat, from the closeness of the tent, and the number of persons crowded in so small a compass, that he was frequently obliged to go into the open air in order to breathe.

The next morning the whole company departed at seven; and found the ascent in some places so steep, that they who preceded were obliged to hew out steps with a hatchet. At eleven they reached the summit of Mont Blanc. Here they continued three hours and a half, during which time M. de Saussure enjoyed, with rapture and astonishment, a view the most extensive as well as the most rugged and sublime in nature; and made those observations which will render this expedition no longer a matter of mere curiosity. Until a complete and ample detail of those observations shall be communicated to the public, you will perhaps not be displeased with the following particulars selected from a temporary

temporary publication of M. de Saussure himself*.

He did not find the cold so extremely piercing as was experienced by Dr. Paccard and James Balmat. By comparing his experiments on Mont Blanc with those made at the same time by M. Senebier at Geneva, he was enabled to make the following comparisons. Reaumur's thermometer stood in the shade at $2\frac{3}{10}$ below freezing point, or 27. of Fahrenheit; at Geneva at 22. 6, or 82 of Fahrenheit, which gives a difference of near 25 degrees of Reaumur, or 45 of Fahrenheit, between the state of the atmosphere at both places,

De Luc's barometer fell to $16. 0\frac{1}{1000}$, and as it stood at Geneva at $27. 2\frac{1}{1000}$, it gives a difference of 11. 2, without regarding the fraction. On estimating the height of Mont Blanc from barometrical experiments, he found it almost exactly correspond with that given by Sir George Shuckborough, or 15,662 English feet above the level of the sea, and which reflects the highest honour on the accuracy of the English observer.

* A translation of this account, by the Rev. Mr. Martyn, professor of botany in the university of Cambridge, printed by Kearsley, forms an Appendix to his Sketch of a Tour through Switzerland, which I would recommend to the traveller.

By experiments with the hygrometer, the air on the top of Mont Blanc contained six times less humidity than that of Geneva; and to this extreme dryness of the atmosphere, he imputes the burning thirst which he and his companions experienced. It requires half an hour to boil water on the top of Mont Blanc, fifteen or sixteen minutes are sufficient at Geneva, and fourteen or fifteen by the sea side. By experiments on the electrometer, the balls diverged only three lines; the electricity was positive. On the summit he noticed two butterflies on the wing; observed, at the elevation of 11,392 feet above the sea, the *Silene Acaulis*, or moss campion, in flower; and still higher up, on the most elevated rocks, the *Lichen Sulphureus* and *Lichen Rupestris* of Hoffman.

He adds, that the summits of Mont Blanc and the adjacent mountains were composed of granite; and that, after Mont Blanc, the Schreckhorn and Mount Rosa in Piedmont, appeared the most elevated points.

M. de Sauffure, as well as many of his party, found themselves extremely affected by the rarefaction of the air; and at two began returning. They descended a little lower than the place in which they passed the preceding night, and arrived the next morning at the valley of Chamouny

mouny without the least accident; and, as they had taken the precaution to cover their faces with crape, their skins were not excoriated, nor their sight debilitated.

On the eighth of August, a few days after M. de Saussure's expedition, Mr. Beaufoy an English gentleman, succeeded in a similar attempt, though it was attended with greater difficulty, arising from the enlargement of the chasms in the ice. An account of this expedition was read before the Royal Society on the 13th of December 1787, and will probably be communicated to the public.

L E T T E R 40.

*Conjectures on the Formation and State of the
Glaciers.*

NO subject in natural history is more curious than the origin of these glaciers, extending into fields of corn and pasture, and lying, without being melted, in a situation, where the sun is sufficient to bring the earth to maturity: for it is almost literally true, that with one hand I could touch ice, and the other ripe corn. But as in my first expedition to the alps my stay was exceedingly short, I declined entering upon a subject too important to be superficially treated, and

only threw together a few hasty remarks, which occurred to me on the spot. But I find that these remarks, however hasty and superficial, served to excite your curiosity; and have induced you to inquire, "*Which is the most rational system concerning the formation of the glaciers? Are they in a state of augmentation or diminution; or do they remain within the same limits?*"

Although in my subsequent journeys to the alps I made this subject a particular object of research; and although I have attentively perused the principal systems, which have been formed concerning the formation of glaciers; yet it is not without great diffidence, that I can presume to reply to your very arduous questions.

The theory of Gruner, confirmed and amended by that able naturalist M. de Saussure, appears to me the most simple and rational; and I do not know how I can better satisfy your curiosity, than by forming an extract from his much esteemed work*, interspersing it with a few additional remarks drawn from my own particular observations.

If a person could be conveyed to such an elevation as to embrace at one view the alps of Switzerland, Savoy, and Dauphiné, he would behold a vast chain of mountains, intersected by numerous vallies, and composed of many parallel chains, the highest occupying the center, and the

* Voyages des Alps, v. i. c. 7.

others gradually diminishing in proportion to their distance from that center.

The most elevated, or central chain, would appear bristled with pointed rocks; and covered, even in summer, with ice and snow, in all parts that are not absolutely perpendicular. On each side of this chain he would discover deep vallies clothed with verdure, peopled with numerous villages, and watered by many rivers. In considering these objects with greater attention, he would remark, that the central chain is composed of elevated peaks and diverging ridges, whose summits are overspread with snow; that the declivities of the peaks and ridges, excepting those parts that are extremely steep, are covered with snow and ice; and that the intermediate depths and spaces between them are filled with immense fields of ice, terminating in those cultivated vallies which border the great chain.

The branches most contiguous to the central chain would present the same phenomena, only in a lesser degree. At greater distances no ice would be observed, and scarcely any snow, but upon some of the most elevated summits; and the mountains diminishing in height and ruggedness, would appear covered with herbage, and gradually sink into hills and plains.

In this general survey, the glaciers may be divided into two sorts; the first occupying the deep

vallies situated in the bosom of the alps, and termed by the natives *Vallées de Glace*, but which I shall distinguish by the name of *Lower Glaciers*; the second, which clothe the summits and sides of the mountains, I shall call *Upper Glaciers*.

1. The Lower Glaciers are by far the most considerable in extent and depth. Some stretch several leagues in length; that of des Bois in particular is more than fifteen miles long, and above three in its greatest breadth.

The Lower Glaciers do not, as is generally imagined, communicate with each other; and but few of them are parallel to the central chain: they mostly stretch in a transverse direction, are bordered at the higher extremity by inaccessible rocks, and on the other extend into the cultivated vallies.

The thickness of the ice varies in different parts. M. de Saussure found its general depth in the glacier des Bois from eighty to a hundred feet; but questions not the information of those who assert, that in some places its thickness exceeds even six hundred feet.

These immense fields of ice usually rest on an inclined plain: being pushed forwards by the pressure of their own weight, and but weakly supported by the rugged rocks beneath, are intersected by large transverse crevices; and present the

the appearance of walls, pyramids, and other fantastic shapes, observed at all heights and in all situations, wherever the declivity is beyond thirty or forty degrees.

But in those parts, where the plain on which they rest is horizontal, or only gently inclined, the surface of the ice is nearly uniform; the crevices are but few and narrow, and the traveller crosses them on foot, without much difficulty.

The surface of the ice is not so slippery as that of frozen ponds or rivers: it is rough and granulated, and is only dangerous to the passenger, where there is a steep descent. It is not transparent, is extremely porous and full of small bubbles, which seldom exceed the size of a pea, and consequently is not so compact as common ice: its perfect resemblance to the congelation of snow impregnated with water, in its opacity, roughness, and in the number and smallness of the air-bubbles, led M. de Saussure to conceive the following simple and natural theory on the formation of the glaciers.

An immense quantity of snow is continually accumulating in the elevated vallies which are enclosed within the alps, as well from that which falls from the clouds during nine months in the year, as from the masses which are incessantly

stantly rolling from the steep sides of the circumjacent mountains. Part of this snow, which is not dissolved during summer, impregnated with rain and snow-water, is frozen during winter, and forms that opaque and porous ice of which the Lower Glaciers are composed.

2. The Upper Glaciers may be subdivided into those which cover the summits, and those which extend along the sides of the alps.

Those which cover the summits of the alps, owe doubtless their origin to the snow that falls at all seasons of the year, and which remains nearly in its original state, being congeled into a hard substance, and not converted into ice. For although, according to the opinion of some philosophers, the summit of Mont Blanc, and of other elevated mountains, is, from the glistening of the surface, supposed to be covered with pure ice; yet it appears, both from theory and experience, that it is not ice but snow. For, in so elevated and cold a region, there cannot be melted a quantity of snow sufficient to impregnate with water the whole mass, which remains undissolved. Experience also justifies this reasoning. M. de Saussure found the top of Mont Blanc only encrusted with ice, which, though of a firm consistence, was yet penetrable with a stick; and on the declivities of the summit he discovered,
beneath

beneath the surface, a soft snow without coherence.

The substance which clothes the sides of the alps is neither pure snow like that of the summits, nor ice which forms the Lower Glaciers, but is an assemblage of both. It contains less snow than the summits, because the summer heat has more power to dissolve it, and because the liquefied snow descending from above, the mass is penetrated with a larger quantity of water. It contains more snow than the Lower Glaciers, because the dissolution of the snow is comparatively lesser. Hence the ice is even more porous, opaque, and less compact than the ice of the Lower Glaciers; and is of so doubtful a texture as renders it, in many parts, difficult to decide, whether it may be called ice or frozen snow.

In a word: there is a regular gradation from the snow on the summits to the ice of the Lower Glaciers, formed by the intermediate mixture of snow and ice, which becomes more compact and less porous in proportion as it approaches the Lower Glaciers, until it unites and assimilates with them. And it is evident, that the greater or lesser degree of density is derived from the greater or lesser quantity of water, with which the mass is impregnated.

In

In regard to your second question, "*Whether the glaciers are in a state of increase or diminution,*" though I declined on a former occasion to enter minutely upon a subject, which required much accurate observation and repeated experimental investigation; yet I ventured to make one remark, which seemed to prove the occasional increase and diminution of the glaciers; contrary to the opinion of some philosophers, who maintain, that they continue always the same; and of others, who assert, that they are continually increasing.

The borders of the glacier of Montanvert, are mostly skirted with trees: towards its base a vast arch of ice rises to near a hundred feet in height; under which the Arveron rushes with considerable force, and in a large body of water. As we approached the ice, we passed through a wood of firs: those trees which stand at a little distance from the arch are about eighty feet high, and are undoubtedly of a very great age. Between these and the glacier, the trees are of a later growth; as is evident from their texture and inferior size. Others, still smaller, have been overturned and enveloped in the ice: there seems to be a kind of regular gradation in the age of these several trees, from the largest which are standing to the smallest that lie prostrate.

These

These facts justly lead to the following conclusions:—that the glacier once extended as far as the row of tall firs; that, upon its gradual dissolution, a number of trees shot up in the very spots which it formerly occupied; that, since that period, the ice has again advanced; and has overturned the trees of later date, before they had grown to any considerable height.

To these circumstances, the following fact may be added. Large stones of granite are usually found at a small distance from the extremities of the glacier. These stones have certainly fallen from the mountains upon the ice; have been carried on in its progress; and have tumbled into the plain upon the dissolution or sinking of the ice which supported them. These stones, which the inhabitants call *Moraine*, form a kind of border, towards the foot of the valley of ice, and have been pushed forward by the glacier in its advances: they extend even to the place occupied by the larger pines.

As several writers upon Switzerland have, in contradiction to these facts, endeavoured to prove, that the snow and ice are continually accumulating in the alps, I shall here throw together a few additional remarks, that may tend to confirm the contrary opinion.

The

The Inferior Glacier of Grindelwald was so considerably diminished since my first expedition in 1776, that the spot which its extremity then occupied was, in 1785, removed at least four hundred paces from its former site. In the valley of Chamouny, the *Murailles de Glace*, which I described as forming the border of the glacier of Bosson, no longer existed; and young trees had shot up in the parts which were then covered by the glacier of Montanvert.

The advocates, however, for the increase of the glaciers, admitting these facts, yet deny that any judgment can be formed concerning the state of the more elevated regions, from what passes in the vallies, where the sun has power to bring the fruits of the earth to maturity. They assert that it appears, both from theory and fact, that more snow falls, and more ice is annually formed in the alps than can be annually dissolved.

To judge from theory; they argue, that the cold occasioned by the mass of ice already formed ought to augment it still further; and in regard to experience, it is evident, that within the memory of the present generation, many mountains have been covered, many pastures and habitations invaded, and many passages irrecoverably obstructed by the ice.

In

In considering the arguments drawn from theory, we may observe, that the causes which tend to the diminution of the ice, are no less powerful than the augmentation of the cold, which is supposed to occasion its indefinite increase. These causes are principally; 1. rain and sleet in the less elevated regions; 2. evaporation; 3. descent of the snow and ice, both precipitous and gradual; 4. heat of the atmosphere; 5. mean temperature of the earth.

1. The rain and sleet, which falls during summer upon the Lower Glaciers, not only thaws the ice, but increases those rills that collect on the surface, excavate channels, descend into the clefts, and assist in forming them.

2. Evaporation is a still more powerful cause; as it acts at all heights, and in all seasons.

3. The descent of the snow and ice, as distinguished by precipitous and gradual. The precipitous, or continual fallings of congeled snow, termed by the natives *avalanches*, are detached either by their own weight, softened from their hold by the heat of the sun or the warm air which blows from the south, or overthrown by the violent hurricanes that are extremely common in the upper alps. When these masses are precipitated into a milder air, though they may sometimes indeed resist the influence of heat, and form

form valleys of ice, yet they are more usually dissolved. These *avalanches* are most common in the Upper Glaciers; whereas the gradual descent of the ice is chiefly confined to the Lower Glaciers, and is a very powerful agent in lessening the aggregate mass.

All the Lower Glaciers, or vallies of ice, rest on an inclined plain, are arched or hollow, and are undermined and weakened by the torrents, which are constantly flowing, as well from the Upper Glaciers, as from their own interior surface.

The natural tendency of a heavy body in such a position is to descend; and its progressive motion is accelerated in proportion to its own weight, and the greater inclination of its basis. This progressive motion, which acts, though imperceptibly, yet gradually and uniformly, carries the ice into those cultivated plains and vallies, where the sun ripens the fruits of the field; and where a period is necessarily put to its further increase.

If you require a proof of this imperceptible descent, the answer is obvious. It is to be collected from the facts which I have already enumerated; namely, from the trees which are occasionally overturned by the ice in its progress, and by the moraine of stones which is observed at the bottom of the Lower Glaciers. These
stones

stones being similar to the mountains of the upper alps, and essentially different from the rocks below, must have been conveyed by the ice in its descent from the Upper Glaciers.

4. The heat of the atmosphere, or the efficacy of the sun's rays on the outward surface of the glaciers, is too evident to require any proof, even to those who have never been in the alps.

Another cause of a thaw, derived from the heat of the atmosphere, which will not be expected by those who have not visited these icy regions, is the warm winds which blow by night as well as by day in the Upper no less than in the Lower Glaciers. These warm winds are, during summer, so common in these parts, that I never crossed a glacier without feeling, in some particular positions, a warmth similar to the air of a hot-bath.

5. But as these two causes only operate in summer; and as the sun's rays do not produce sufficient effect in the highest parts, we must have recourse to the mean temperature of the earth, which seems to be the greatest and most powerful agent in preventing an indefinite augmentation of ice and snow. This mean temperature, termed by some philosophers the internal * heat of

* Some philosophers impute this constant thaw, which takes place in the lower surface of the glaciers, to an internal

of the earth, is always above the freezing point, as is evident from the heat of the springs which issue from the bowels of the earth. In winter, therefore, or in those high regions of the globe where the cold is usually below the freezing point, when any spot of ground is covered with only a thin coat of snow, it may be so far cooled, to a certain depth, by the influence of the external air, as not to be capable of dissolving any part of the superincumbent snow. But when the mass of snow is of such a thickness as to protect the surface of the ground from the effects of the atmospherical cold, the mean temperature, which is always above the freezing point, will be sufficient to melt the contiguous surface of snow, and to occasion a constant thaw, which supplies those currents of water, that flow, at all seasons, from the Upper and Lower Glaciers.

In regard to the argument derived from experience, it is sufficient to observe, that while I admit the facts which prove the progress of the ice, it by no means seems to follow that its sum

source of heat in the earth ; but that opinion has been very ably refuted by several modern naturalists ; the mean temperature of the ground being found sufficient to account for *all* the phenomena, local circumstances excepted, which have been usually assigned to an internal heat of the earth.

is perpetually increasing. For the advocates who support this opinion, while they scrupulously enumerate the places which have been invaded by the ice, do not take any notice of those parts, no less numerous, from which the ice has retired.

During my second expedition into the Alps, I also made this point of controversy a particular object of my researches; and on inquiring from the *chasseurs*, and other persons who frequent the mountains, the greatest part were of opinion that the collection of ice and snow, even in the elevated regions, was by no means in a continual state of augmentation; but that while it gained in some places it diminished in others; and that upon an average, the aggregate mass was nearly the same.

L E T T E R 41.

Account of the Bouquetin, or Mountain-Goat.

I Observed at Michael Paccard's, a guide of Chamouny, a head and horns of the male *bouquetin*, or mountain-goat, and stuffed specimens of a female and a young one.

As this animal is extremely rare, and inhabits the highest and almost inaccessible mountains, the descriptions of it have been very inaccurate and confused. But a new light has been lately thrown on the subject by Dr. Girtanner of St. Gallen, and by M. van Berchem, secretary to the Society of Sciences at Lausanne; and although these two naturalists differ in some instances, yet their joint labours have assisted in ascertaining the nature and oeconomy of this curious animal. The following account, therefore, of the *bouquetin*, is drawn principally from their observations in Rozier's Journal, and from additional information obligingly communicated to me by M. van Berchem himself *.

The

* The engraving which accompanies this letter, contains a full-grown male *bouquetin*, figured from one in Ridinger's

ne
ing
in-
r's



Full grown Male Bouquetin

Published as the Act directs Jan^y 26. 1789, by T. Cadell, Stirling.

*Head of a Male Bouquetin
two Years Old*

The elder naturalists speak of the bouquetin as of an animal well known, and in their time by no means uncommon on the high alps of Switzerland, especially in the canton of Glarus and in the country of the Grisons. On the town-hall at Glarus, there is still a pair of horns of an extraordinary length, belonging to an animal of this species, formerly killed in the canton. These horns are probably the same which Ray saw in the last century, when the natives informed him, that the breed was extinct in that canton.

That this animal was found among the Grisons, appears from a letter in the possession of M. de Salis Seervis, dated the 14th of October, 1574, in which the Archduke Ferdinand of Austria requires from his bailif of Castels, in the Pretigau, two bouquetins alive; adding, that he had received several from his predecessors. About

ger's "*Abbildung der Jagtbaren Thiere*," and the head and horns of a male bouquetin aged two years, communicated by M. van Berchem. I had the former engraved, because Ridinger's plates are extremely rare, and the figure is the best representation of the bouquetin of the Alps which has fallen under my observation; and the latter, because it refutes the opinion usually maintained, that the age of this animal may be ascertained from the number of transverse ridges in the horns.

forty years after the date of this letter the animal began to be rare; for a decree in the year 1612 prohibits the chace of the bouquetin under a fine of fifty crowns, and that of the chamois from New-year's day to St. John, under the penalty of ten crowns. Sprecher, in his *Pallas Rhetica*, published in 1617, relates that the chace of the bouquetin was not uncommon in his time, in the vallies of Pregallia, Vals, and Upper Engadina. Another law of 1633, confirmed in the following year, inflicts corporal punishment on those who kill a bouquetin. But these severities could not preserve the breed; and it is probable that this was the epoch of their destruction, when the fear of their being extinct prompted government to forbid the chace *. And it is certain, that within the memory of the present generation, no bouquetins have been found in a wild state in the country of the Grisons.

* Franciscus Niger, in his description of the Grisons, as quoted by Conrad Gesner, says, that they spare this animal in hunting, because it is the armorial bearing of the country.

“ Pareitur hinc Capricorne tamen tibi, Panos amice,
 “ Arma quod exornes, et pulchra insignia gentis,
 “ Hinc longam hinc vitam vivens, ingentia jactas.
 “ Cornua, perque plicas rugosa, repandaque in armos,
 “ Formosusque nigris villis in montibus erras.”

This

This animal is now chiefly found upon that chain which stretches from Dauphiné through Savoy to the confines of Italy, and principally on the alps bordering on Mont Blanc, which is the most elevated part of that chain. Its particular haunts are the valley of Cormayor to the south of Mont Blanc, those heights which lie between Mont Blanc and the frontiers of the Vallais, and the mountains which border the Val Savarenche; but it is met with more abundantly in the mountains of the valley of Cogne, which is the frontier of the valley of Dent in Piedmont; and almost always frequents those parts that have a southern aspect.

The several names by which the bouquetin is known in different languages, are, in Greek, by Homer and Ælian, Αἰξ ἀγρία *; Latin, *Ibex*, which name has been adopted by most modern naturalists; Italian, *Capra Selvatica*; German and Swiss, *Steinbock*, or Rock-goat, the female, *Etagne*, or *Ybschen* and *Ybschgeiss*, perhaps from the Latin *Ibex*; Flemish,

* Most naturalists affirm that Homer calls this animal Αἰξ ἰξάλος, whereas he styles it αἰξ ἀγρία, or the wild-goat, adding the epithet ἰξάλος, or wanton.

Wildgbeit; French, *Bouquetin*, anciently *Bouc-estain*, the German name reversed. Belon named it *Hircus ferus*; Briffon, *Hircus Ibex*; Linnæus, *Capra Ibex*; Pennant, the *Ibex*; and Dr. Girtanner, *Capra Alpina*. I have adopted the name of *Bouquetin*, because it is the provincial appellation of the animal in the Alps.

The systematic naturalists agree in taking the specific character of the bouquetin from the beard, and the horns, which they describe as knobbed along the upper or anterior surface, and reclining towards the back.

The male bouquetin is larger than the tame goat, but resembles it much in the outer form. The head is small in proportion to the body, with the muzzle thick, compressed, and a little arched. The eyes are large, round, and have much fire and brilliancy. The horns large, when of a full size weighing sometimes 16 or 18 pounds, flattened before and rounded behind, with one or two longitudinal ridges, and many transverse ridges; which degenerate towards the tip into knobs; the colour dusky brown. The beard long, tawny, or dusky. The legs slender, with the hoofs short, hollow on the inside, and on the outside terminated by a salient border, like those of the chamois. The body short, thick, and strong,

strong. The tail short, naked underneath, the rest covered with long hairs, white at the base and sides, black above and at the end. Space under the tail in some tawny, in others white. The coat long, but not pendent, ash-coloured, mixed with some hoary hairs: a black list runs along the back; and there is a black spot above and below the knees. Its colour, however, like that of other animals, must necessarily vary according to its age and local circumstances.

The female has been little noticed among naturalists. She is one third less than the male, and not so corpulent: her colour is less tawny: her horns are very small, and not above eight inches long. In these, and in her figure, she resembles a goat that has been castrated whilst young. She has two teats, like the tame she-goat, and never has any beard, unless, perhaps, in an advanced age. The young ones are of a dirty grey colour, and the list along the back is scarcely discernible.

There is a stuffed specimen of the male bouquetin of the alps in Mr. Parkinson's, late Sir Ashton Lever's, Museum, of which I have here given some of the principal dimensions, as they are not to be found in any author that has fallen under my observation, except in Buffon's *Histoire Naturelle*;

turelle; and those were taken by Mr. Daubenton from a young subject.

	Feet.	Inches.
Length of the head from the lower jaw		
to the space between the horns —	0	9 $\frac{1}{2}$
Length from the root of the horns to		
the base or origin of the tail —	4	4
Height at the shoulder before —	2	5 $\frac{1}{2}$
Height at the shoulder behind —	2	7 $\frac{1}{8}$
Circumference of the body next to the		
fore legs — — —	3	6
Circumference next the hind legs —	3	2
Circumference in the middle —	3	8
Circumference of the neck, close to the		
shoulders — — —	2	3 $\frac{1}{2}$
— — — between the		
ears and the horns — —	1	4

The horns being so remarkable a part of this animal, I shall here add the measurement, not only of those belonging to Mr. Parkinson, but of several pairs which are deposited in the British Museum. Those in the second and third columns certainly belong to the bouquetin of the alps. Their colour is a dusky brown. The first of these is very flat before; the second is not so flat; neither the longitudinal nor transverse ridges are so strongly marked: these are evidently the horns of a very old animal. The horns

horns in the fourth column belong also to the bouquetin; but probably from some other country. Their colour is black; they are much flatter on the sides, and narrower before than the others; the longitudinal ridge is very strongly marked, and the transverse ridges stronger and more numerous. I cannot observe any more than one * longitudinal ridge in any of the horns which I have examined, the exterior part of the front being universally rounded off, and the transverse ridges run very little into the sides. The horns in the fifth column belong unquestionably to the *Ægagrus* of Pallas, which is not improbably a variety of the bouquetin. Two fine pairs of these were given to the Museum by the late duke of Northumberland. They have no anterior flat face, but a sharp ridge, with a few knobs in front, about nine in number, and very distant from each other; they are streaked transversely, more evidently towards the end. Their extremities are much arched, with the points turning inwards. The colour is the same with those of the alpine bouquetins.

* Most naturalists affirm, that the horns are marked with *two* longitudinal ridges; all those that have fallen under my observation have only *one* interior longitudinal ridge, and a faint mark on the exterior edge, which is probably taken for the *second* longitudinal ridge.

DIMENSIONS of the horns in Mr. Parkinson's, late Sir Ashton Lever's, Museum (n. 1.) and in the British Museum.

	N ^o 1.		N ^o 2.		N ^o 3.		N ^o 4.		N ^o 5.	
	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
Rectilinear direction, or chord, from the root to the tip —	2	1½	1	9	2	0	1	8	1	6
Arc, or length measured along the curvature —	2	8	2	6½	3	6	3	0	3	9
Circumference at the base —	0	9½	0	8	0	10½	0	9	0	9
Distance between them at the base —	0	0½	0	1	—	—	—	—	0	0½
Distance between them at the tips —	1	9½	2	2	—	—	—	—	—	—
Number of transverse ridges —	24		12		20		24			

It is a common notion of the hunters, adopted by many naturalists, that the age of a bouquetin may be estimated by the number of transverse ridges or knobs in the horns. M. van Berchem, however, assures me, from his own observations, that this is a vulgar error; and that its age can only be ascertained by the number and form of the teeth, as in sheep and goats. This mistake has also occasioned its term of life to be supposed much longer than it really is. This animal increases in bulk to the age of four years; according, therefore, to the system of the Count de Buffon, that the age is about seven times the growth; its life is twenty-eight or thirty years.

In

In a state of tranquillity, the bouquetin commonly carries the head low; but in running holds it high, and even bends it a little forward. He mounts a perpendicular rock of fifteen feet at three leaps, or rather three successive bounds of five feet each. It does not seem as if he found any footing on the rock, appearing to touch it merely to be repelled, like an elastic substance striking against a hard body. He is not supposed to take more than three successive leaps in this manner. If he is between two rocks which are near each other, and wants to reach the top, he leaps from the side of one rock to the other alternately, till he has attained the summit. He also traverses the glaciers with rapidity; but only when he is pursued, for otherwise he avoids them.

The bouquetins feed, during the night, in the highest woods: but the sun no sooner begins to gild the summits, than they quit the woody region, and mount, feeding in their progress, till they have reached the most considerable heights. They betake themselves to the sides of the mountains which face the east or south, and lie down in the highest places and hottest exposures: but when the sun has finished more than three quarters of its course, they again begin to feed, and to descend towards the woods; whither they retire when it is

is likely to snow, and where they always pass the winter. The bouquetins assemble in flocks, consisting at the most of ten, twelve, or fifteen; but more usually in smaller numbers. The males which are six years old and upwards, haunt more elevated places than the females and younger bouquetins; and as they advance in age are less fond of society; they become gradually hardened against the effects of extreme cold, and frequently live entirely alone.

In summer they feed principally on the *genipi* and other aromatic plants which grow in the high alps; and in winter they eat the lichens, and browse on bushes and the tender shoots of trees. They prefer those spots where the dwarf birch and alpine willows grow, and where *rhododendron*, *thalictrum*, and *saxifrages*, abound.

The bouquetins having their fore legs somewhat shorter than the hind legs, naturally ascend with greater facility than they descend; for this reason nothing but the severest weather can engage them to come down into the lower regions; and even in winter, if there are a few fine days, they leave the woods and mount higher.

Winter is the season of love with them, and principally the month of January. The females go with young five months, and consequently produce

duce in the last week of June, or the first of July. At the time of parturition they separate from the males, retire to the side of some rill, and generally bring forth only one young, though some naturalists affirm that they occasionally produce two.

The common cry of the bouquetin is a short sharp whistle, not unlike that of the chamois, but of less continuance: sometimes it makes a snort, and when young bleats.

The season for hunting the bouquetin is towards the end of summer, and in autumn, during the months of August and September, when they are usually in good condition. None but the inhabitants of the mountains engage in the chase; for it requires not only a head that can bear to look down from the greatest heights without terror, address and sure-footedness in the most difficult and dangerous passes, and to be an excellent marksman, but also much strength and vigour, to support hunger, cold, and prodigious fatigue. The most determined hunters of bouquetins live in the mountains of the Lower Vallais: for instance, the natives of Servan, a village in a wild and picturesque situation, four leagues from Valorsine, and two or three from Martigny, are hunters; and the bouquetins being no longer found in their mountains, they hunt in those of

the valley of Aost, obtaining a permission for that purpose from the inhabitants.

Two or three hunters usually associate in this perilous occupation: they are armed with rifle-barrelled guns, and furnished with small bags of provisions; they pass the night among rocks at considerable heights; they erect a miserable hut of turf, where they lie without fire or covering, and on waking not unfrequently find the entrance blocked up with snow three or four feet in depth. Sometimes, in the pursuit of a bouquetin, being overtaken by darkness amid crags and precipices, they are obliged to pass the whole night standing, embraced in order to support each other, and to prevent themselves from sleeping. As the bouquetins ascend into the higher regions very early in the morning, it is necessary to gain the heights before them, otherwise they scent the hunter and betake themselves to flight: it would then be in vain to follow them, for when once they begin to escape, they never stop till they think themselves entirely out of danger, and will even sometimes run for ten or twelve leagues.

The female shows much attachment to her young, and even defends it against eagles, wolves, and other enemies; she takes refuge in some cavern,

vern, and presenting her head at the entrance of the hole, thus opposes the enemy.

When a bouquetin is shot, the hunters let it cool upon the spot, and then embowel it, putting the blood into one of the entrails, which is esteemed by the peasants a sovereign remedy in pleurifies and some other disorders. A large bouquetin thus embowelled will weigh 180 or 200 pounds. A female weighs only from 70 to 80 pounds.

Some naturalists are of opinion, that the diminution of the race of bouquetins in the Alps is owing to his size, the monstrous length and weight of the horns, which impede him in his course; because he is driven into places where he can scarcely procure sufficient nourishment during great part of the year, where his sight becomes debilitated, and is frequently lost by the strong reflection of the sun from the ice and snow. They consider this animal rather as a native of the subalpine regions, which are covered during summer with the finest herbage, and where the bouquetins and chamois probably pastured in tranquillity, when only the lower vallies and plains were inhabited.

On the contrary, it is maintained by others, that the bouquetin is endued with strength proportionate to his size; and though he is inferior

to the chamois in liveliness and agility, yet he is by no means deficient in activity; that his horns, though large and weighty, yet from their reclined position do not seem to be any impediment, but rather render him essential service when he happens to fall, or purposely throws himself down precipices to avoid his pursuers. They add also, that his natural food is rather lichens than herbs; that he is particularly fond of the young shoots of trees and shrubs; and that in all the places where he inhabits, he is found in the coldest and rudest mountains, and on the steepest rocks. From these circumstances, it is not improbable, that his present situation and manner of life is an effect of nature rather than necessity. Besides, why do the chamois, who are more hunted than the bouquetin, still inhabit the less elevated regions; and why are they not driven into the glaciers? To account for the present scarcity of the bouquetin, we need only consider the number of its enemies, in men, beasts, and birds of prey. Nor is there much cause for apprehensions, that the race will be extinct even in the Alps. But allowing that the bouquetin was no longer found in his native Alps, still we could not affirm with so much propriety that the race was extinct, as that it had migrated into a milder climate, and, with a state of domestica-
tion

tion and more succulent food, had acquired softer manners, a form less rude, smaller and smoother horns. For it is even not improbable that the *bircus ferus* or bouc-estain of Belon, the bouquetin of the Alps, the Siberian ibex, and ægagrus, both so accurately described by Pallas *, and the tame goat in all its different forms, are only varieties of the same species. Their difference in shape and manners may be sufficiently accounted for from a change of climate, situation, and food; they are found to couple freely with each other; and are asserted to produce an offspring which is fertile.

They all have a beard, which seems to be the great characteristic distinction of this genus. They differ more or less from each other in the shape of their horns, size, and coat, none of which can be esteemed certain specific distinctions. The greatest difference undoubtedly consists in the horns, none of them, perhaps, except the bouquetin, having a longitudinal ridge, and some of them being even without the transverse ridges. But this difference is less perceptible, in comparing the bouquetin with the Si-

* Perhaps also the *capra caucasica*, described by Pallas, from the papers of Guldenstaedt, and which he represents as differing from the ægagrus, with which it has been confounded by some naturalists. See Act. Petr. for 1779.

berian ibex, the ibex with the ægagrus, and the ægagrus with the tame goat. Nor are the horns of the Alpine bouquetin so much weightier, longer, and larger, than those of the abovementioned animals, as to form a *certain* specific distinction *.

But even if this difference should be still greater, it could never be admitted as forming a specific distinction. For the horns not only differ in individuals of the same species, but in the same individuals at different ages. If we were to attempt to arrange animals *solely* by their horns, the discriminations would be as endless as uncer-

* The horns of the bouquetin, as has been before observed, are sometimes found to weigh sixteen or eighteen pounds, to be three feet in length, and to have twenty-four transverse ridges. A single horn of a Siberian ibex weighed, according to Pallas, eight Russian pounds, which is one tenth less than an English pound, and had sixteen or eighteen transverse ridges. The horns of another full grown Siberian ibex measured 2 feet 5 inches and 5 lines, along the curvature, and 1 foot 2 inches and 1 line, in a rectilinear direction. The horns of an ægagrus measured 2 feet 2 inches and 9 lines along the curvature, and 1 foot 4 inches in a linear direction. The horns of a full grown Caucasian goat, were 2 feet 4 inches along the curvature, and 1 foot 6 inches in the linear direction. The longitudinal ridge or ridges remain then as the *only* specific difference between the horns of the alpine bouquetin and those of the other species. See the measurements in Pallas Spic. Zool. and in his Description of the Capra Caucasica, in Act. Petr. for 1779.

tain. But if, in the present instance, the alpine bouquetin and the other species of the goat genus should be excepted from this general assertion, we have only to add, that M. van Berchem possesses the horns of a young one, produced from the union of the bouquetin and she-goat, that are exactly similar to the horns of the *ægarus*; which, as Pallas asserts, resemble those of the tame goat. Climate and nutriment must have a great effect upon the horns of animals. The female of the bouquetin has horns very like those of the tame goat. It is no wonder, therefore, if a long servitude, an inactive life, an exchange from the aromatic plants and pure air of the mountains to a gross nutriment and a moister atmosphere, should diminish the horns, alter their shape, subdue the longitudinal ridge, and convert the knobs into wrinkles.

The Count de Buffon extends the goat genus still further, and comprehends under it even the chamois, conjecturing that the bouquetin is the male in the original race of goats, and the chamois the female. The French naturalist having, at the time when he described the bouquetin, never seen it in a full grown state, was probably induced to entertain this opinion from a faint resemblance between the female bouquetin and the chamois. But there does not seem the least

foundation for this notion, the chamois being an animal totally distinct from the goats, never coupling with them, and judiciously classed by Pallas and Pennant in the genus of antelopes. His conjecture, however, that the bouquetin is the original source of all the tame goats seems to be well founded; and has been adopted by the greatest part of succeeding naturalists. And as, according to the just observations of Pallas, the ægagrus approaches nearer than the bouquetin to the tame goat in its form and horns, the ægagrus may be the link which unites the bouquetin and the tame goat. May not the ægagrus be considered as a race produced from the bouquetin and the she-goat, or the goat and female bouquetin? Pallas also conjectures, that the tame goat may possibly have been propagated from the ægagrus and Siberian ibex, which is allowed by most naturalists to be the same as the bouquetin; and Pennant remarks, with no less sagacity, that the tame goats may be derived from both, as we are assured that the ibex and she-goat will produce a similar offspring. It is also probable, that the bouquetin is the origin of all the goat genus, because it is the largest, strongest, and dwells in the most inhospitable regions. For, according to the observation of the same great zoologist,

zoologist *, whom we have so often quoted, those animals who are natives of the coldest mountains must, on descending into the warm plains, be liable to greater changes than those who are formed for milder climates; and this circumstance seems sufficient to account for the great variety observable in the goat genus.

Those who pretend, that the bouquetin cannot be the original stock from whence the goats have been produced, because, as he inhabits only the loftiest summits and rocks covered with eternal snow, and feeds only on plants peculiar to high regions, he cannot be domesticated in a variety of climates. But this opinion is contradicted by fact and experience. Stumpf, the historian of Switzerland, informs us, that the Vallaisans near Sion bred up tame bouquetins with their goats; and Belon relates, that the Cretans tamed the young bouc-estains by giving them to be suckled by the goats. Dr. Pallas also relates, that he has frequently seen the Siberian ibex among the tame goats, and mentions one in particular at Orenburgh, which was leader of a flock, and father of a numerous offspring more resembling the females than himself. He was very different from the tame he-goats, scarcely

* Pallas.

inferior in size to a bouquetin two years old: in colour and strength he resembled the wild animal; had thick horns, knobbed, not keeled above, and a long rough coat, but nowhere pendent, except in the beard: the black list on the back was almost obliterated. And lastly, Mr. van Berchem saw several tame bouquetins at Aigle. They were gentle and familiar; and, without being remarkably lively, were active and graceful in all their motions. They bred with different she-goats, and Mr. van Berchem saw the young ones, which seemed to form a new race.

If these observations should be well founded, the goat genus, or race of the bouquetin, is found in a wild state along the chain of mountains that traverses the temperate parts both of Europe and Asia; on the Pyrenees and Carpathian mountains; on the Taurus and Caucasus; on the mountains of Siberia and Tartary; in Kamtchatka; on the islands of the Archipelago; in Hedsjæas in Arabia; in India; perhaps in Egypt and Lybia*.

L E T T E R

* A chronological list of the authors who have mentioned, described, or figured the bouquetin and ægagrus, is here subjoined.

1548. J. Rudolph.

LETTER 42.

*Journey to Geneva—Pays de Vaud—Lausanne—
Felix the Fifth—Vevay—Tomb and Character
of General Ludlow—Clarens—Meillerie.*

HAVING quitted the delightful vale of
Chamouny and its magnificent scenery,
we

1548. J. Rudolph. Stumpf Gemeine Eidgenossenschaft Beschreibung. Zurich, folio. A good account, translated into Latin, inserted in Gesner's work, and transcribed by many succeeding naturalists.
1551. Conradi Gesneri Historia Quadrupedum. Tiguri, folio. At page 331, &c. is an ample account, from the ancients, Stumpf, and others, with a small figure. At page 1099, however, it is tolerably well figured.
1554. Belon Observations. French edition, p. 20. A good description of the animal in Crete, with a moderate figure.—Latin edition, by Clusius. 1605. p. 20. The figure small and very indifferent.
1617. Sprecher Pallas Rhetica.
1621. Ulyssis Aldrovandi Quadrupedum Bisulcorum Historia. p. 730. fig. 732. Bad.
1657. Joan. Jonston, M. D. Historia Naturalis de Quadrupedibus. Amstel. folio. Page 53. t. 25. f. 1. and t. 28. f. 3, the latter from Gesner.
1674. Olearii

we continued our route towards Geneva. As we proceeded, the height of the mountains gradually diminished; and the several vallies, through which

1674. Olearii Gatterfische Kunst Kammer. Tab. 10. fig. 1. Head and horns.
1677. Charletoni Exercitationes. Oxon. folio. Pag. 10.
1680. Joh. Jac. Wagner, M. D. Historia Naturalis Helvetiæ curiosa. Tiguri. 12mo. At p. 176. a short account.
1693. Jo. Raii Synopsis Quadrupedum. Lond. 8vo. At p. 77. a short description.
1734. Representation des Animaux de la Menagerie de S. A. S. Monseigneur le Prince Eugene. Figures of two males, the female and two young ones, in the last plate. They are called Chamois, but are bouquetins.
1740. Ridinger Abbildung der Jagtbaren Thiere, tab. 11.
1748. Linnæi Systema Naturæ. Holm. 8vo.
1751. Klein Historia Quadrupedum, p. 16. Description from Gefner.
1756. Guil. Henr. Kramer Elenchus Vegetabilium et Animalium per Austriam Inferiorem observatorem. Viennæ, &c. 8vo. p. 321.
- Briffon Regnum Animale, 4to. p. 64. — 8vo. 1762. p. 39.
1764. Buffon Histoire Naturelle, 4to. vol. xii. p. 136. tab. 13. a bad figure of a young one; tab. 14. a good pair of horns.
1766. Caroli a Linné Systema Naturæ, edit. 12. Holm. 8vo. p. 95.
1771. Pennant's Synopsis of Quadrupeds, 8vo. p. 13.
1776. P. S.

which we passed, were agreeably diversified in their figures and productions. We followed the course of the sonorous and violent Arve; and near Salenche we came to a descent, where on our right hand we descried a small lake, the situation whereof is extremely picturesque; and whose borders, skirted with wood, are pleasing and variegated. From hence we descended into the plain, which continues almost perfectly level to Geneva. Salenche lies at the bottom of a broad valley, which here contracts to a narrow pass. Tradition says, that

1776. P. S. Pallas *Spicilegia Zoologica*. Fascic. undecimus Berol. 4to. p. 31. t. 3.—and t. 5. f. 4. contains descriptions of the ibex and ægagrus, and gives figures of the horns of the Alpine and Siberian bouquetin, and of the ægagrus.

1777. Erxleben *Systema Regni Animalis*. Lipsiæ. 8vo. p. 261.

1777. Zimmerman's *Specimen Zoologiæ Geographiæ Quadrupedum*. Lugduni Bat. 4to. p. 166.

This curious and learned work, improved and enlarged, was, in 1780, published by the author in the German tongue, under the following title:

Zimmerman's *Geographische Geschichte*, &c. 3 vols. 8vo. Leipfic. 1780.

1781. Pennant's *History of Quadrupeds*. Article Ibex and Caucasian Goat.

1786. Rozier *Observations sur la Physique, sur l'Histoire Naturelle*, &c. Par. quarto. tome 28, 29. Girtanner, Van Berchem, & Guldenstädt.

1787. Pennant's *Arctic Zoology*.

this

this little plain was once a lake; and indeed its form, and the quality of the soil, seem to justify tradition: great part is laid waste by the unruly Arve, which frequently overflows its banks; and the rest is mostly covered with fruit-trees.

Not far from Magland we stopped to admire a beautiful fall of water, called the cascade of Arpenas, which rushes, like the Staubbach, from an impending rock. When I saw it, there was a considerable wind, which drove the torrent, soon after its leaving the rock, at least an hundred yards out of the perpendicular direction, into an almost imperceptible spray: I then beheld it trickling down the sides of the mountains in a thousand little streams, which united at a ridge; and from thence formed three cascades. The body of water was much more considerable than that of the Staubbach; and the fall appeared to me altogether as high. Between Magland and Cluse we took a guide to conduct us to the cave of *la Balme*. Though the ascent was not very long, yet it was so steep that we were nearly an hour in reaching it: we then scrambled along a precipice, from which we mounted a ladder; and by the aid of the branches of a nut-tree growing from the rock, we pulled ourselves into a natural cavern more than a quarter of a
mile

mile in length, and forming various branches that led into lofty vaults and spacious openings; but the sight of which did not answer the trouble required to enter it.

We passed the night at Cluse, which is situated by the side of the Arve; and the next morning came down the banks of that river to Bonneville, the capital of Faucigny: it stands also upon the Arve, at the bottom of a chain of rocks, which from this place diminish into hills. All this part of Faucigny, as also a small strip of Chablais through which we passed, is a rich plain, that produces wine and corn in great plenty; but is neither populous nor well cultivated. By the little village of Chene we entered into the territory of Geneva: the sudden change from the poverty of the Savoyards to the neatness and ease of the Genevans, the populousness of the country, the richness of its cultivation, and the number of country-seats scattered about the fields, were circumstances, that affected me with a pleasing satisfaction.

As I propose visiting Geneva again, in my way to the south of France, I will defer giving any account of that interesting town until my return.

We went from Geneva to Craffi, a small village in the Pays de Vaud, where we passed a day with

with an English gentleman, who has taken a house for the summer in that delightful spot. In our way to Crassi we passed through Verfoi, a little village in the French territories, upon the lake of Geneva: it goes by the name of *Choiseul's folly*. Geneva having fallen under the displeasure of France; that minister endeavouring to take advantage of the troubles in 1768, laid a plan to ruin the town, and to monopolise the whole trade of the lake. Accordingly he fixed upon Verfoi as a situation the most proper, upon which to build a large town. For this purpose, he began by sinking a pier and making an harbour: he constructed also a frigate; marked out the streets; sent a considerable quantity of stone to build the houses; ordered a garrison, and erected huts for them, in which they continued some time. Nevertheless, when the harbour was nearly finished, and government had expended about £. 125,000, the scheme was relinquished.

The road from Geneva to Lausanne runs through the *Pays de Vaud*, a region of which historians and travellers speak with rapture; particularly of that part which borders upon the lake of Geneva: and indeed a more delightful country cannot well be imagined. It is, almost the whole way, a gradual ascent from the edge
of

of the lake, richly laid out in vineyards, corn-fields, and luxuriant meadows; and checkered with continued hamlets, villages, and towns: the shores are generally of the cleanest gravel; and the water is of so fine a transparency, that you may see the bottom to a very considerable depth.

We passed through Nyon, which stands delightfully upon the edge of the lake, and in the very point where it begins to widen. It was formerly called *Colonia Equestris Noiodunum*; and, as a proof of its antiquity, several Roman inscriptions, and other antient remains, have been frequently discovered in the out-skirts of the town. In this part the lake forms a beautiful curve, happily alluded to by Lucan, where he mentions the army of Julius Cæsar striking their tents, which were posted on the borders.

Deferuere CAVO tentoria fixa Lemano *.

All the possessions in this country formerly belonging to the duke of Savoy, were wrested from him in the war, which the canton of Berne declared against him, in 1536, in defence of Geneva: and in the same year the reformation

* “ They strike their tents and quit the hollow bend

“ Of Lemane’s lake.”

was

was introduced. From that period all the Pays de Vaud, excepting the common bailliages of Granfon, Orbe, and a small portion of it which was ceded to Friburgh, has been subject to Berne, and makes part of that canton.

Morges, which is situated at the extremity of a beautiful bay, is the neatest town in these parts. The environs are extremely pleasant; the banks of the lake form an amphitheatre gently rising to the Jura; and Mont Blanc presents itself through an immense opening in the opposite chain of rocks, which seems to have been formed by nature in order to exhibit a sublime perspective of that beautiful mountain. Near the town is a lime-tree of a great size, being twenty-four feet four inches in circumference, and with branches of magnificent extent; it has a companion about three feet less in girth. Mr. Pennant informs me, that "this tree is a native of Switzerland, and of many other parts of the continent; that it was imported into England before the year 1562; one being described by Dr. William Turner as growing in a park near Colchester; that one thirty-six feet in circumference grew near the great church at Berne; it was planted about the year 1410; and its hollow trunk, still putting forth leaves, was
to

to be seen in the year 1720*. The Germans, in old times, were fond of planting the lime before their churches and in the market places, on account of its grateful shade. This tree is now grown much out of use; yet the Romans esteemed it so highly, as to say that it was employed for a thousand purposes, *tiliæ ad mille usus petendæ*. A sweet juice exudes from the leaves and bark, from which the Poles extract a honey called by them Liepiz†. Bees are also fond of the flowers; for that reason Virgil, in his beautiful description of the industrious Corycian, places the lime and the pine in the neighbourhood of his hives."

Lausanne contains about seven thousand inhabitants: it is built upon an ascent so steep, that in some places the horses cannot, without

* A large lime is to be seen on the heights above Villars, a seat belonging to Mr. Graffenred of Berne, near Morat. Its girth measures at least thirty-six feet in circumference, and its height is not less than ninety feet. It is very ancient, as it was lopped in 1550, for the sake of the bark. The traveller who visits this tree, will be no less gratified with an extensive prospect, commanding the lakes of Morat, Neuchatel, and Bienne, and that stupendous chain of snowy alps, which is represented on the engraving inserted in this volume.

†

———— cogere pressis

Mella favis; illi tilia, atque uberrima pinus.

great difficulty, draw up a carriage; and foot-passengers ascend to the upper part of the town by steps. But these inconveniences are amply compensated by the sublimest views in nature, commanding the lake of Geneva, the Pays de Vaud, and the rugged coast of Chablais.

The same year in which part of the Pays de Vaud was conquered from the house of Savoy, the bishop of Lausanne retiring from the town, the inhabitants put themselves under the protection and sovereignty of the canton of Berne; which confirmed and augmented their privileges. At present, Lausanne is governed by its own magistrates; has its own courts of justice; and, what is very singular, the citizens, who possess houses in the principal street, enjoy the privilege of pronouncing sentence in criminal causes. The criminal is tried by the civil power: if he is found, and acknowledges himself guilty, the burghers of this street assemble; one of the magistrates pleads in defence of the prisoner, and another against him; the court of justice give their opinion upon the point of law; and the majority of the citizens, possessing houses in the principal street, determine the penalty. If the punishment is capital, there is, according to the letter of the law, no pardon, except it be obtained within twenty-four hours from the sovereign

reign

reign council of Berne; although it generally happens, that eight days are granted for that purpose. When the criminal is seized within the jurisdiction of the town; the fact is tried, and the burghers pronounce sentence, in the town-hall: in this case there is no appeal. But, when he is taken within the district of the bailif, they assemble in his house; and an appeal lies from their determination to Berne. I have been the more particular in my inquiries concerning the mode of this criminal process, from the strong resemblance it bears, in some respects, to our trial by juries.

Here is an academy for the students of this country: professors in every science are appointed by government; and there is a tolerable library for the use of the public.

I have several times had the good fortune to meet Tissot, the celebrated physician of this place; well known in the literary world for his excellent writings upon several medical subjects. His conversation is uncommonly interesting; as, besides his skill in his profession, he is well versed in every branch of polite literature. His private character is no less respectable than his public; and he is as much esteemed for his great humanity as for his superior knowledge.

The church of Lausanne, formerly the cathedral,

dral, is a magnificent gothic building, standing on the most elevated part of the town. It contains, among many other sepulchres, the tomb of Amadeus the Eighth, duke of Savoy, styled the Solomon of his age; but more known by the name of the anti-pope Felix the Fifth; who exhibited a singular instance in the annals of Europe, of a personage *twice* abdicating the pomp of sovereignty, and *twice* retiring to a private station.

Having passed his early youth and opening manhood in the pursuits of ambition, he enlarged his dominions by the acquisition of the Genevois and Piedmont, and obtained an increase of rank by the erection of Savoy into a dutchy. Yet in the midst of his greatest success, and when fortune seemed most propitious, the sudden death of a beloved wife, and a narrow escape from assassination, inspired him with such a disgust of the world, that he resigned, in 1434, the administration of his estates to his eldest son; and, accompanied with a few lords of his court, retired to a palace at La Ripaille, on the borders of the lake of Geneva. In this palace, which he called an *hermitage*, he enjoyed, with an apparent indifference to the affairs of the world, a calm and tranquillity that seemed incompatible with his former aspiring ambition;

until he was suddenly called forth to public notice in a more exalted station.

The council of Basle having deposed Eugenius the Fourth, induced, according to some authors, by the reputation which Amadeus had acquired for sanctity, influenced, according to others, by his largesses and intrigues, raised the *hermit* of La Ripaille to the papal throne. This event took place in 1439: the new pontiff quitting his favourite retreat, accepted the proffered dignity, either with a real or affected reluctance, and assumed the name of Felix the Fifth.

The æra of his disputed pontificate was marked with turbulence and anarchy. In order to avoid the storms which agitated Europe, and to favour the natural indolence of his temper, he frequently retreated to his beloved hermitage, and directed the affairs of the church from that sequestered corner. Conscious at length that his acceptance of the papacy served to widen instead of healing the schism of the church; finding that he was opposed by the most powerful princes of Europe; that, on the death of his rival Eugenius, the cardinals of Rome had chosen another pope; and being ill supported by the remains of the council of Basle, he terminated the schism by resigning the papal tiara in favour of Nicholas the Fifth. In this transaction he proved his talents for ne-

gotiation by obtaining the following conditions: that he should enjoy the next rank to the pope; that he should be appointed vicar of the Roman see; and that all the acts passed in his pontificate should be valid. On his resignation he fixed his residence at La Ripaille, and died in 1451.

Felix the Fifth has shared the fate of many equivocal characters. By some he is represented as a saint, by others as covering the most ambitious designs under the mask of sanctity; by the former, his residence at La Ripaille is described as the retreat of religious austerity; by the latter, as the seat of luxury. In this, as in most other cases, both parties seem to have exceeded the truth. On reviewing the principal events of his life, we may conclude, that a palace built by a sovereign prince, in which he was accompanied by many lords of his court, where he instituted an order of knighthood, and where he resided with the pomp and dignity of a sovereign pontiff, could be no common *hermitage*; and that he assumed the name, rather than passed the life, of a *hermit*; while the power and rank which he secured to himself, on his resignation of the papacy, sufficiently demonstrate, that he never intended to renounce the world. On the contrary, should we admit, that his life at La Ripaille was not embittered by
I penance

penance and mortifications ; yet as no contemporary authors, even those who were by no means partial to his character, have stigmatised his retirement, we ought not hastily to conclude, that it was the retreat of a mere voluptuary. But in whatever light his moral qualities may be considered, no one can withhold from him the character of an able politician.

It is not my intention to enter into a general or particular description of the Roman antiquities, which have been found in Switzerland ; if you are curious in researches of that sort, I must refer you to Bochart, Miller, Spon, and other antiquarians, who have treated minutely of that subject. I cannot, however, avoid mentioning two lately-discovered Roman monuments, which are placed in the garden of Mr. Levade, near the church at Lausanne.

The first is an altar of white marble with red veins, and was found, in 1782, by some workmen in digging the foundations of a house in the town of Vevay. It is broken in a horizontal direction ; and what remains is a foot and a half long and a foot high. The inscription, though not entire, proves it to be an altar erected by the twentieth legion to the god Silvanus.

DEO SILVANO
 ESPER URSUL.
 FICIO LEG. XX.
 DIC

The second monument is a Roman mile-stone, which was discovered in a vineyard near Pauda, a few paces from the high road.

It bears the following inscription :

Imp.
 Cæs T. Æ. Avg
 Antonino
 Pio • P M. Krib -
 Cos. III. P. P.
 Avent : M. P. T
 XXXVIII.

This inscription ascertains a fact long unknown to the Swiss antiquarians. Bochart, among others, expresses his surprise, that no inscription, bearing the name Antoninus Pius, who was so great a benefactor to the antient Helvetians, has been as yet found in Switzerland. But this mile-stone, which was put up in the third consulship of that emperor, proves the existence of such an inscription ; and is probably the prelude to the discovery of other monuments erected in his honour.

The

The road from Lausanne to Vevay, runs along the sides of the mountains, between continued ranges of vineyards. The industry of the Swiss is no where more observable than in these parts: the mountains in many places, though naturally consisting of a bare steep rock, are thickly covered with vines. The mould has been brought from other grounds, in order to create a soil, and is supported by rows of stones ranged in strait lines like walls.

But this mode of culture however advantageous, and even necessary to the natives, occasions a disagreeable uniformity in the face of the country. The vines also do not form a pleasing and picturesque appearance, like those of the Valteline *, which are carried in beautiful festoons from tree to tree. The plants are low, and fastened to poles about four feet in height; and the high walls which enclose them, and border the road, frequently interrupt the view.

This district between Lausanne and Vevay is called *La Vaux*, and contains the two pleasant little towns of Lutry and Cully; as also the two villages of St. Saphorin † and Corsier: it is entirely

* See vol. iii.

† In the church of St. Saphorin, is an antient Roman mile-

tirely hilly, rising abruptly from the lake. Above the vineyards, are rich meadows, and a continued forest.

Vevay, the antient *Vibiscum*, is the principal town of the bailliage of that name: it is clean and well-built, stands in a small plain at the foot of the mountains on the edge of the water, and is one of the few towns in the canton of Berne which carry on any trade. The borders of this part of the lake are much more contrasted, wild, and picturesque, than those about Geneva: the mountains of the Vallais and Savoy

mile-stone, found near that village, with the following inscription:

TI. CLAUDIVS. DRVSI. F.
CÆS. AVG. GERM.
PONT. MAX. TRIB. POT. VII.
IMP. XII. P. P. COS. III.

F A

XXXVII.

This inscription ascertains two circumstances, which have been frequently called in question; namely, that the banks of the lake of Geneva, which border this part of Switzerland, were comprised within a Roman province, even so early as the time of Claudius; and also, that *Aventicum* was the chief town of this part of Helvetia: for, the mile-stones always referred to the capital town of the province in which they were placed. From St. Saphorin to *Avenches* is exactly 37,000 paces; which answer to the 37th mile-stone.

boldly

boldly project into the water, and form a semi-circular chain that encloses the lake, except where they are divided by the Rhone; which flows into it a few leagues from Vevay.

Vevay is distinguished as being the residence of Edmund Ludlow, the famous parliamentary general, whose name stands foremost among the few persons, who, in those times of misrule and confusion, uniformly acted with consistency and dignity. True to his republican principles, he no less violently opposed the daring usurpation of Cromwell, than the arbitrary measures of Charles the First; and could never be prevailed upon, either by threats or promises, to desert the cause, which he considered as the cause of justice and liberty.

Being excepted, as one of the king's judges, from the act of indemnity passed at the restoration of Charles the Second, he wandered, without any fixed place of residence, until he found an asylum from the base attempts of his enemies at Vevay, under the protection of Berne.

At the important period of the revolution, he returned to England, anxious to serve his country under our great deliverer; and William the Third, whose mind rose superior to the narrow prejudices of party, was no less desirous to employ

employ a general of such approved experience and fidelity. But the king being addressed by the House of Commons to issue a proclamation for apprehending Ludlow, at the moment his majesty was going to employ him; he was accordingly compelled to quit England at this critical period, and again settled at Vevay. We may collect from his general character and conduct, that if he had been permitted to serve his country, he would have successfully employed his great military talents against the assertors of bigotry and despotism; and with the same zeal, which he had displayed in opposing an arbitrary government, would have supported the new administration; when the enormous prerogatives of the crown, against which he had unsheathed his sword, were abolished by law; and the freedom of the subject was established on the basis of equal liberty under the authority of a limited monarch.

He died in 1693, in the sixty-fourth year of his age; and was interred in the church of Vevay. His monument is a plain grave-stone of black marble, containing a Latin inscription, which is printed in Addison's Travels. The house which he formerly inhabited stands near the gate leading to the Vallais, and the following motto

motto is inscribed over the door, which is still preserved out of respect to his memory. *Omne solum forti patria est, quia patris.*

The Memoirs of Ludlow are written in a simple and perspicuous stile; with the fidelity of a man who was actually engaged in the scenes which he describes, and with the spirit of a general zealous in the cause which he had espoused and defended. Perhaps his animated detail of the trial and execution of the Regicides is scarcely surpassed by any narrative in antient or modern history.

Nature can scarcely form a position more delightful than that of Chatillard or Clarens. It stands, not far from Vevay, above the village of Clarens, on an eminence, whose gentle declivity slopes gradually towards the lake: it commands a view of that majestic body of water, its fertile borders, and the bold rocks and alps of Savoy. The adjacent scenery consists of vineyards, fields of corn and pasture, and rich groves of oak, ash, and Spanish chesnut-trees. Although the situation and environs harmonize with the animated scenery in the *Eloise* of Rousseau, yet the castle by no means accords with the description in the same work. The traveller sees an oblong building with antient towers and a pent-house roof; in the inside a large hall that looks like

like a prison ; and the whole bears rather the antiquated appearance of a feudal mansion inhabited by some turbulent baron, than the residence of the elegant and impassioned Julie.

Opposite to Clarens, on the other shore of the lake, are the dark gloomy rocks of Meillerie. That village lies in the recess of a small bay, at the foot of impending mountains, in some parts gently sloping, and clothed to the water's edge with dark forests ; in others naked and perpendicular, bringing to recollection the fancied rocks of Leucate *.

These are the scenes of the Nouvelle Eloïse. Having obtained that novel at a circulating library in Lausanne, I continued, during these expeditions, to examine the position of the country, and compare it with the descriptions of Rousseau. Small objects may be magnified ; but no pencil, however animated, can delineate the wonderful and sublime works of nature ; even the warm colouring of Rousseau has not equalled the beauty of the situations. I read with atten-

* Je n'ai plus qu'un mot à vous dire, ô Julie. Vous connoissez l'antique usage du *rocher de Leucate*, dernier refuge des amans malheureux. Ce lieu-ci lui ressemble à bien des égards. La roche est escarpée, l'eau est profonde, & je suis au desespoir.

tion the principal parts of that singular performance; and having now the scenery before me, I dwelt more particularly upon that letter, in which St. Preux relates his expedition to Meillerie; wherein love and despair are worked up almost to madness. Although there are no traces of any history like that of Julie in these parts, yet the scenery is strongly marked; and every spot, which is mentioned in the letters, actually exists in this romantic country. Rousseau himself passed some time at different parts on the borders of the lake, and particularly at Meillerie, about that period of his life when he may be supposed to have written his *Eloise*. Open that performance, read that letter, and consider that part of it, where St. Preux points out the number of towns and villages, the continued fertility and high cultivation of the Pays de Vaud, and contrasts it with the gloomy coast of Chablais, exhibiting only a few towns lying on the edge of the water; you will then see the happy and superior effects of liberty under a mild and equitable government, like that of Berne.

I am, &c.

LETTER 43.

*Castle of Chillon—Villeneuve—Aigle—Salt-Works
of Bex and Aigle.*

TRavellers not unusually make an agreeable excursion from Vevay to the salt-works of Bex and Aigle.

The road continues along a plain, with hills on one side, and the lake on the other. Haller's judicious distinction of the elevated part of this country, may from this spot be well exemplified. The rocky alps are seen with their pyramidal tops shooting into the heavens, and incrustated with eternal ice and snow. Snow likewise, at various intervals, covers the steep slopes beneath the aspiring peaks; rich pasturage succeeds; and the bottoms are verdant with forests of firs. The mountains, such as the Jura and those rising towards Denis and Gruyeres, are fertile in grass, well wooded, their tops even, extensive and arable; and

though with little appearance of rock on the surface, yet internally filled with a hard yellowish stone fit for building, but impatient of the chisel. The *collines*, or little hills, are frequent at the foot of the mountains, and separated by little vallies watered by small brooks.

“The further I advanced, the nearer the mountains approached the lake; their nature changed, their height increased, and their craggy tops and wooded sides convinced me, that I was approaching the genuine alps. Above the woods soared, in a most picturesque manner, a lofty pyramidal crag called *Le Dent de Jamant*. The woods were firs mixed with oak. The road lay close to the water’s edge. The castle of Chillon, or rather the castellated house, is a large pile with round and square towers: it stands on a rock in the lake, and is connected to the land by a draw-bridge. The vaults are very fine; the arched roofs, and the pillars which support it, are in a neat gothic stile. This castle, in 1536, was wrested from Charles the Third of Savoy by the canton of Berne, assisted by the Genevans, who furnished a frigate (their naval force) to besiege it by water. In a deep dungeon, below the level of the lake, the conquerors found Bonivard, prior of St. Victor, the intrepid antagonist of the dukes of Savoy, and the great asserter of Gene-

van independance. He had been imprisoned by the Savoyards during six years; and, by constant walking in his short limits, had worn a hollow in the rock. This castle was for a short time the residence of a bailif from Berne, until a more convenient house was purchased for that officer in Vevay. About half a league further is Villeneuve, a small town at the extremity of the lake. This magnificent piece of water here terminates; its breadth, at this place, is about a league. I travelled along its concave side from Geneva to Villeneuve fifty-four miles. It is in the shape of a crescent; Switzerland forms the hollow; Savoy the convex part; its greatest breadth is from St. Sulpice to Grande Rive, where it is twelve miles wide. Savoy affords a rude and awful boundary of aspiring alps, craggy and covered with the ice of ages. The country from Geneva to the environs of Lausanne, slopes for a considerable way to the margin of the lake, and is enriched with all the varieties which nature can bestow. The long ridge of the Jura, fertile in pasturage, and varied with woods, backs this beautiful tract. Near Lausanne the banks rise very considerably, and form a most charming terrace. A few miles beyond Lausanne is a rapid descent. Near Vevay begins a plain, which is continued far beyond the end of the
the

the lake, but contracting, by the approach of the mountains, towards the water. The colour of the water is extremely beautiful, clear, and at a distance seems of a most lovely blue.

“Near Geneva the coast abounds in small pebbles covered with a brown incrustation. From Geneva as far as Lausanne the shores are sandy; but from Lausanne to Chillon appear ledges of rocks hard and calcareous: the extremity of the lake is a marsh formed by the collected mud of the Rhone.

“The depth is various. M. de Luc assured me, that on sounding it he had found the greatest depth to be a hundred and sixty fathoms: like all inland lakes enclosed within high mountains, it is subject to sudden storms.

“I am uncertain whether any birds frequent the lake which are not common to the rest of Switzerland. The tippet grebes * appear here in December and retire in February. The skins are an elegant article of luxury, and sell here for about twelve or fourteen shillings each. These birds are obliged to breed in other places, this lake being almost totally destitute of reeds and rushes, in which they form their floating nest. From Villeneuve the road runs through a beautiful valley, consisting of the richest meadow and

* Pennant's Brit. Zool. vol. ii. No. 222.

corn land, very populous and finely wooded, and expanding to the breadth of four miles. The alps bound each side, with tops broken into vast crags of various forms.

“ I passed near La Roche, where a director of the salt-works is deputed by the government of Berne ; and which is rendered memorable by the residence of Haller, who filled that office from 1758 to 1766. During his retirement in this place, that distinguished man prepared for public inspection many of his numerous publications, and particularly his immortal work on physiology.

“ I left at a little distance Yvorne, ruined, in 1584, by the lapse of a mountain occasioned by an earthquake ; crossed the torrent called La Grande Eau, and halted at Aigle, a good town, seated at the feet of some small round hills prettily covered with firs. This country was conquered from the Savoyards by Berne in 1475, and was made a distinct government consisting of four *Mandemens*. The governor resides at Aigle. It formerly had its particular heads, the family of Torrens ; but the last count formally resigned his pretensions at Berne in 1553. This government of Aigle reaches to the Pays de Vaud ; and, when under the dominion of the house of Savoy, was comprised within that district ;

district; at present it is classed under the German division of that canton, although French is the language of the natives. Further on the valley is greatly contracted, and so filled with trees as to appear a great forest. The laburnum abounds here in a wild state. The wood is beautifully veined, of great strength, and much used for wedges and musical instruments. The variety with short spikes of flowers has the most elegant veins, and is called the *ebony* of the Alps: Pliny says its wood is the hardest next to the ebony. The cornelian cherry is common in the hedges, and the fruit is frequently preserved with sugar. The *Machaleb* cherry, or *Prunus Machaleb*, is to be found in these parts; the wood is red, of fine scent, and in request for handles of knives, it is known among cutlers by the name of *Bois de St. Lucie*. A pleasant-scented water is distilled from this tree; and the seeds are used to give a fragrantcy to soap.

“ Between Aigle and Bex is a most picturesque view of the castle of St. Tryphon, on the summit of a lofty insulated rock in the middle of the plain; it is quite surrounded with wood, and realises Milton’s description of an ancient castle,

“ *Bosom’d high in tufted trees.*”

I am informed it is built of marble, which is no wonder, as a beautiful black species is found very near. St. Tryphon was a Phrygian, who is said to have suffered martyrdom at Nice in 251, at the time of the persecution under the emperor Decius.

“Bex is a small town at the foot of the mountains, five miles from the salt-works at Beviex. Between Bex and Beviex, I observed the larch in great plenty. Painters, from the time of Pliny to that of Raphael, trusted their works to this wood, which the Roman naturalist styles *immortale lignum*. The wood is reckoned excellent for all works which are to lie under water; and the borderers on the lake of Geneva prefer it for building their vessels. In these parts I saw most beautiful woods of chesnut. Haller says that they extend some leagues; he also informs us, that they are found in other parts of Switzerland, and even in desert places in some of the transalpine parts; accident must have brought them thither, as it appears from Pliny, that these trees were first introduced into Europe from Sardinia.”

Upon our arrival at the salt-springs, I put on a workman's jacket, and went into the mountain about 3,000 feet, almost horizontally. The gallery

gallery is about six feet high, and four broad, and is as nicely hollowed as if it had been cut with a chissel: it is hewn in a black rock, veined in some places with white gypsum. The salt is procured from some springs, which are found within a solid rock, perforated at a great expence: the richest source yields twenty-eight pound of salt *per cent.* and the poorest but half a pound in the same quantity. Near these springs are several warm sources, strongly impregnated with sulphur; some of which contain also a mixture of salt, and will flame if a lighted candle is put into the pipe through which they flow. No solid salt, excepting a few small cubes, has been as yet discovered; but the mountain is replete with particles. Rocks of white gypsum or alabafter, mixed with bluish clay, are common near the springs, in the same manner as may be observed in the pits of Northwich, in Cheshire.

After travelling in this subterraneous passage near three quarters of a mile. I observed a great wheel of thirty-five feet diameter, which serves to raise the brine from the depth of about seventy feet. From this place is a shaft three hundred feet high, which is cut through the mountain to the surface, for the purpose of introducing fresh air. I observed two reservoirs hollowed in the

solid rock for holding the brine; one whereof was a hundred and sixty feet square, and nine in depth. Since my first expedition to these pits in 1776, the workmen had pierced the rock twenty-five feet deeper, and cut a gallery a hundred feet in length. They had also began to form a third reservoir, which is to contain 5,500 cubic feet; and of this nearly half was finished.

The brine deposited in these reservoirs is conveyed, by means of two thousand pipes, about a league to Bevieux, where the salt is extracted.

The brine pits near Aigle contain only from two to one-half *per cent.*; and yield annually about a third as much as those of Bevieux, or about 5,000 quintals. The salt is much whiter and heavier than that of Bevieux, and consequently bears a higher price.

These salt-works, which are the only ones in Switzerland, scarcely yield a neat yearly profit of more than £. 3,000; and furnish only one-twelfth of the annual consumption in the canton. The remainder is procured chiefly from France, which is obliged by treaty to provide the Swiss states with this commodity at a moderate price: and indeed so high is the tax upon salt in that kingdom, that even the French salt is sold two thirds cheaper in Switzerland, than in many parts
of

of France *. The ordinary price of common salt throughout the canton, is at the rate of three half-pence per pound.

LETTER 44.

Valley and Lake of Joux—Orbe—St. Barthelemi—Yverdun.

Yverdun, Sept. 7.

THE chain of mountains called the *Jura*, begins in the canton of Zurich; from thence extends along the Rhine, into the canton and bishopric of Basle; stretches into the canton of Soleure and the principality of Neuchatel; branches out towards the Pays de Vaud; separates that country from Franche Comté and Burgundy; and continues beyond the frontiers of the Genevois as far as the Rhone. In various

* At Paris, where it is the dearest, a pound of salt is sold for about 13 sols, or about six-pence of our money: in some other parts of France, for instance in Franche Comté, a pound costs only 4 or 5 sols; but it is furnished to the Swiss at the rate of $2\frac{1}{2}$ sols.

parts of the Pays de Vaud this chain forms many elevated vallies much visited by travellers, amongst which, not the least remarkable, is the valley of the lake of Joux, upon the top of that part of the Jura called Mont Joux; and which lies in the bailliage of Roman Motier. This valley contains several neat and well-peopled villages, and is beautifully checkered with wood, arable, and pasture ground. It is watered by two picturesque lakes; the largest of which is called the lake of Joux. One shore is high rock, covered with wood; the opposite banks form a gentle ascent, well cultivated and producing grain, backed by an abrupt ridge adorned with pines, beech, and oak. The smaller lake, called Lac Brenet, is in its shape more oval, and richly bordered with corn-fields and cottages. These two lakes are divided by a narrow neck of land; and over the channel or little streight is a wooden bridge of a single arch, which leads to the village of Charbonniers.

Near the small village of Abbaye, a rivulet gushes from the bottom of the rock, and loses itself in the largest lake. From the smaller lake descends a stream, and is lost in a hollow gulph called *L'Entonnoir*, or the Funnel, a name common to several others in this place. In this gulph several mills are placed, and turned by the force

force of the current. About two miles further, on the other side of the mountain, the river Orbe bursts forth, and is probably produced by the last-mentioned stream here ingulphed.

This little vale is very populous, containing about three thousand inhabitants, who are remarkably industrious. Some make watches, but the greatest part are employed in polishing crystals, granites, and marcasites. In the small village of Pont, where we lodged, the greatest part of the inhabitants bear the surname of Rochat; a name which also runs through the village of Charboniere, with the exception of only two or three families; and is prevalent likewise in that of Abbaye: the whole number of these Rochats amounts to above a thousand. I inquired whether, like the Scottish clans, they took the appellation from any chief; or whether they were supposed to be descendants of the same family: I was assured, that the latter is the fact, and that their ancestors came originally from France. These parts are much infested with bears and wolves.

In our ascent to this delightful vale, and as we descended through a variety of hill, valley, wood, and lawn; we had a most extensive prospect, comprehending great part of the Pays de Vaud, the lake of Geneva with its mountainous bound-

ary, and that of Neuchatel. These two lakes appear, from that high point of view, to be nearly upon the same level *, with no considerable swell of the country intervening.

We passed through a beautiful and picturesque country from Romain Motier to Orbe; which, according to antiquarians, was the most antient town, and once the most powerful, of all Helvetia. It was called *Urba*, and was the capital of the *Pagus Urbigenus*: no remains however exist at present of its antient splendour. Some antique fortifications, an old castle, and a round tower, are works probably of later and more turbulent times; erected, perhaps, when this country was divided into a number of feudal sovereignties.

I am greatly pleased with the romantic situation of Orbe, the boldness of the single-arched bridge projecting over the Orbe, the wild scenery on the banks of that river, its frequent cataracts, and with various picturesque views in the environs.

Mr. Venel, an eminent surgeon of this town, has formed, under the protection of the government of Berne, an establishment which well de-

* According to Mr. de Luc, the lake of Neuchatel is 159 French feet above that of Geneva.

serves the attention of the humane and curious traveller. It is an infirmary for the reception of those objects, who are born with distorted limbs, or have by accident acquired that misfortune.

The children are lodged and boarded in the house, under the care of his assistant, who charges himself with all the detail of housekeeping, and of instructing those, whose age renders it requisite, that their education should not be neglected.

Mr. Venel's skill in improving and simplifying those machines necessary for his purpose, has been sufficiently attested by the various cures which he has performed that way.

Though he chiefly confines his attempts to infants and children, yet he has performed several cures on adult persons. His most efficacious remedy is a machine which he has invented to embrace the patient's limbs when in bed, and which is so contrived as to act without disturbing their rest. Ingenious as his method is, yet he acknowledges, that much of his success depends on the mild treatment of the patients, and on having them continually under his inspection. I was convinced indeed of the mildness of his treatment, by observing several of these children, from four to ten years of age, crawling about the ground,

ground, and diverting themselves with great cheerfulness, although cased up in their machinery. It may not perhaps be unworthy of remark, that Mr. Venel, on the admission of a miserable object, takes in plaister of Paris the mold of the distorted limbs, in order to demonstrate the change that takes place. Such an establishment redounds highly to the honour of Mr. Venel, and the government who protects it; and is worthy of imitation in all countries.

Orbe, which is governed by its own magistrates, is comprised within the bailliage of Echalens, belonging to Berne and Friburgh: these two cantons alternately send a bailif, who resides at Echalens, and remains in office during five years. When Berne appoints the bailif, an appeal lies from his decisions to the sovereign council of Friburgh; as it does to the government of Berne, when he is nominated by Friburgh. By these means a great check is laid upon the exactions of the bailif: and I am informed, that justice is no where more equally administered than in these common bailliages of the two cantons.

Perhaps one of the most beautiful and finest positions in Switzerland is the castle of St. Barthelemi, the seat of Count d'Affry, colonel of the

the Swiss guards; and now inhabited by his son, count Louis d'Affry, to whom I was indebted for a most kind and friendly reception. This ancient family-seat stands on an eminence in the bailliage of Echalens, about three miles from Orbe, near the high road which leads from Lausanne to Yverdun. The sides of the eminence are feathered with wood; and below are rich fields and meadows of the finest verdure, watered by two lively torrents which unite and form the Falun. Upon the high road, the count has reared an obelisk, on which he has inscribed, in the true spirit of toleration and forbearance, the following words, "*Praise God, all ye nations,*" in the English, Latin, French, and German languages.

The castle commands a prospect of a most fertile and well-wooded country, gently broken into hill and dale; on one side appears a distant view of the Jura and the hills of Burgundy and Franche Comté; and, on the other, the horizon is bounded by the rugged alps in the canton of Berne and in the Vallais, by Mount Veilain, the highest point of St. Bernard, and Mont Blanc, whose superior elevation above the surrounding heights is such, that its summit reflects the rays of the rising sun several minutes sooner, and

and retains those of the setting sun several minutes later than any of the circumjacent mountains.

From St. Barthelemi we descended into the plain, which stretches to the lake of Yverdun. This plain was formerly covered as far as Entre-roches (three leagues from its present position) and probably further, by that lake: it is now, for a considerable part, a great swamp. Within a quarter of a mile of the town, are warm baths which are strongly sulphureous, and much frequented during the summer months.

Yverdun is large, airy, and well-built with stone, like the towns in the Pays de Vaud: it stands near the lake, in a small island formed by the two branches of the river Thiele. Between the town and the lake there is a pleasant lawn extending to the water, and planted with avenues of lime-trees.

Yverdun carries on scarcely any trade, and its principal support arises from the passage of the merchandise between Piedmont and Germany. This town is celebrated for its printing-press, established in the beginning of the present century; but entirely neglected until, some years ago, it was renewed by *Felice*, a Neapolitan of learning and abilities.

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The lake of Yverdun, or of Neuchatel, stretches from south to north about twenty miles in length, and in some places about five in breadth. Its shores near Yverdun are covered with country-houses.

It is somewhat extraordinary, that the dull and tasteless uniformity of the French gardens should have been adopted by the Swiss, whose country abounds with noble and picturesque situations, and where nature wantons in the most luxuriant variety. I have frequently observed, in the midst of these romantic scenes, a majestic forest sliced into regular alleys; and at the very borders of the fine lakes, artificial pools of water edged with sun-burnt parterres.

If any person should, in this instance, accuse me of national prejudice, let me exclaim with Voltaire, who certainly cannot be convicted of partiality to the English:

*Jardins plantés en symétrie,
Arbres nains tirés au cordeau,
Celui qui vous mit au niveau
En vain s'applaudit, se récrie;
En voyant ce petit morceau,
Jardins il faut que je vous fuie,
Trop d'art me revolte et m'ennuie:
J'aime mieux ces vastes forêts*

*La nature libre et hardie
Irreguliere dans ses traits
S'accorde avec ma faintaïsie.*

I am, &c.

L E T T E R 45.

Granſon—Neuchatel—Mr. Pury's Benefactions.

WE ſkirted the weſt ſide of the lake of Neuchatel through Granſon, the principal town of a bailliage of that name, belonging to Berne and Friburgh, and remarkable for the battle in which Charles the Bold, duke of Burgundy, was defeated by the Swiſs in 1476. We entered the principality of Neuchatel about ſix miles from that town, and paſſed through St. Aubin, Boudri, Colombier, lying pleaſantly upon the borders of the water. The road runs along the ſide of the Jura, through a country that reſembled, in ſome meaſure, the diſtrict of La Vaux, between Lauſanne and Vevay: the ſides of the Jura are almoſt the whole way covered with vines, ſupported in many parts

by low stone walls. The borders of this lake are more uniform than those of the lake of Geneva; and do not rise into such high, irregular, and grotesque alps as the coast of Chablais. Towards Grançon and St. Aubin, the country is more diversified with meadows and corn-fields; nearer to Neuchâtel the summits of the mountains are clothed with forest, and the midland and lower parts entirely planted with vines.

Between the lake and the Jura several rivers burst from the rock in considerable streams; and, after turning several mills, fall into the lake at a little distance from their source. The largest is that of La Serrière, near a small village of the same name, which we crossed in our way to Colombier, where we dined with a family whose acquaintance we had formed at the baths of Leuk. We passed a very agreeable day with these amiable persons; by whom we were received with that frankness and unaffected ease which characterises true politeness.

After dinner some musicians of the country performed the *Renz des vaches*: that famous air which was forbidden to be played among the Swiss troops in the French service; as it awakened in the soldiers such a longing recollection of their native country, that it often produced in them a

settled melancholy, and occasioned frequent desertion. The French call this species of patriotic regret, *la maladie du pays*. There is nothing peculiarly striking in the tune; but, as it is composed of the most simple notes, the powerful effect of its melody upon the Swiss soldiers, in a foreign land, is the less surprising. Nothing indeed revives so lively a remembrance of former scenes, as a piece of favourite music which we were accustomed to hear amid our earliest and dearest connections: upon such an occasion, a long train of associated ideas will necessarily arise in the mind, and, if not totally selfish, melt it into tenderness. To use the language of poetry,

There is in souls a sympathy with sounds.

Wherever I have heard

A kindred melody, the scene recurs,

And with it all its pleasures and its pains.*

It is observable, that those who inhabit mountainous countries are most subject to this *maladie du pays*, because their habits of life are essentially different from the customs and manners of other parts. Accordingly, the Scotch highlanders, and the Biscayans, as well as the Swiss, when absent from their country, are pecu-

* Cowper's Task, book vi.

liarly apt to be affected with every circumstance that recalls it to their minds.

The town of Neuchatel is small, and contains about 3,000 souls. It lies partly upon the little plain between the lake and the Jura, and partly upon the declivity of that mountain: in consequence of which situation, some of its streets are very steep. At the commencement of the present century, commerce was almost wholly a stranger in this town; as the ridiculous pride of its being deemed degrading, generally prevailed among the inhabitants. This senseless prejudice is now, however, nearly extinguished. The chief article of exportation is wine, produced from the neighbouring vineyards, and much esteemed. Manufactures also of printed linens and cottons have been established with success: and within these few years, several merchants have raised large fortunes.

P O S T S C R I P T.

Oct. 3, 1786.

THE mildness of the government, and the general well-being of the inhabitants, are visibly demonstrated from the increase of population among the natives, and the prodigious influx of settlers. The number of souls in the principality

of Neuchatel and Vallengin being, in 1752, only 28,017 subjects, and 4,318 aliens, amounted, in 1784, to 31,576 subjects, and 9,704 aliens, which gives an increase of near a fourth part within the space of thirty-two years.

The facility of acquiring the burghership of Neuchatel, has also prevented any decrease of its inhabitants. Thus the magistrates, between the years 1760 and 1770, admitted forty-one burghers; from 1770 to 1780, forty-six; from 1780 to 1785, fifty-one; in all, a hundred and thirty-eight. Many of these settlers had children before they purchased the burghership; and thirty-eight were foreigners, either German, French, or Swiss.

Several public works and buildings have been lately executed at Neuchatel, at an expence far exceeding the revenues, or even wants of this little state. Amongst others I shall mention a superb causeway leading towards the valley of St. Imier, and a town-house, which is built of such solid materials, as if it was intended to survive to the most distant posterity, and to rival the duration of the much-famed Roman capitol *.

The person, to whom the burghers of Neu-

* *Capitoli IMMOBILE saxum.* Virgil.

chatel principally owe the embellishment of their town, is Mr. David Pury, late banker of the court at Lisbon. He was a citizen of Neuchatel, and was born in 1709: his father was mayor of Lignieres, afterwards colonel and justice of peace in South Carolina, and founder of Purifburgh. Having received his education in his native town, he quitted it, as some say, in great poverty, and repaired to Geneva, where he passed his apprenticeship, but in what house, or in what trade, the person, who obligingly furnished me with these anecdotes, does not mention. From Geneva he went to London, and acted as one of the clerks to an eminent merchant who trafficked in precious stones, and where he acquired a great skill for estimating at sight the value of diamonds. After a long residence in England, he established himself in Lisbon, and carried on a very extensive commerce, particularly in brazil-wood and precious stones. Being appointed court-banker, he rapidly increased his fortune. This generous man, however, did not, with a parsimony not unusual in persons who have enriched themselves by commerce, consign his money to his coffers, or sparingly distribute his largesses; on the contrary, while living, he remitted large sums of money to his native town; and being unmarried, and having none but distant

tant relations, left his country his heir. The following is a list of the sums which he gave away, either in charitable donations, or for the improvement of Neuchatel.

From the year 1771 to 1786, £. 100 annually for the poor of Neuchatel, and the same sum for those of Vallengin, which, for fifteen years, amounts to £. 3,000. Different sums at various periods, and for divers uses, to January 1785, amounting to £. 15,900. To this must be added the purchase of near 7,000 tickets in the lottery, towards raising a fund for building and endowing an hospital; which tickets he also presented to the said hospital. He died on the 31st of May 1785; and the remains of his fortune, bequeathed to his country, after the payment of a few legacies, does not fall short of £. 160,000, which, together with the contributions in his life-time, render his benefactions equal to almost £. 200,000.

His grateful country obtained from the king of Prussia the title of baron in his favour; a title which, through his singular modesty, he neither bore nor used in the signature of his letters. The citizens of Neuchatel have also placed the portrait of this generous benefactor in one of the apartments in which government assembles; and have

have ordered a marble bust to be executed for the new town-house.

The large legacy which Pury has bequeathed to the town, being more than sufficient to complete the buildings and public works, it would well become the wisdom of government to employ part of the remainder, rather in useful undertakings, than in the construction of new edifices, which are not wanted. With respect to those works, which regard the health and convenience of the town, it may be sufficient to hint, that the public walks, which are now much neglected, might be improved; the streets, which are extremely dirty, be cleansed; and the torrent, which traverses the town and threatens it with frequent inundations, may be turned. But particularly a large field is open for the protection and encouragement of literature; for even in the essential article of education this place is so deficient, that it can scarcely be said to possess a single seminary; consequently the inhabitants, though endowed with lively parts and good capacities, are yet much less informed than those of the other Protestant towns in Switzerland. A new spirit may be given to the study of the arts and sciences; and the seminary may be rendered of great public utility by appointing two or
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three professors for the instruction of youth. Thus future generations, enlightened by means of this benefaction, will repeat with satisfaction the name of Pury; joining in their grateful commemorations those magistrates, who first opened the sources of science and literature, and taught them to flow for the improvement of a distant posterity.

L E T T E R 46.

Expedition to Locle and Chaux de Fond.

Neuchatel, Sept. 11.

I AM charmed with an expedition to the summit of the Jura; and will give you a short account of it, while the impression remains warm upon my mind.

The principality of Neuchatel and Vallengin, stretches from the lake to the limits of Franche Comté; containing in length, from north to south, about twelve leagues, and about six in its greatest breadth. The district of Neuchatel occupies all the plain, together with the lower parts
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of the mountains : while Vallengin is totally enclosed within the Jura. Parallel chains of the Jura run from east to west, and form, in the most elevated parts, several valleys. The lower grounds of this chain are arable lands and vineyards : the higher consist of large tracts of forest, which in many parts have been cleared, and converted into considerable pastures, intermixed with some fields of barley and oats. But the singular genius and industry of the numerous inhabitants, particularly demands the attention of every curious traveller.

We passed through *Vallengin*, the capital of the district of that name ; a small open burgh, with a modern castle built on some antient ruins. We then crossed the *Val de Ruz*, which contains above twenty villages, situated at the foot of the mountains which border the valley : the inhabitants in general are employed in agriculture, some few excepted, who follow occasionally the mechanical arts.

We arrived about mid-day at La Chaux de Fond, a large handsome village lying in a broad valley which reaches to Franche Comté : from thence we proceeded to Locle, through a continued range of pleasing cottages, which skirt both sides of the road ; and are scattered likewise over the country. As these two little towns or villages

villages carry on the same commerce; I shall comprehend them both under one common description.

La Chaux de Fond and Locle, together with the districts belonging to them, may contain about six thousand inhabitants, remarkably distinguished for their genius, industry, and skill in the mechanical arts. They carry on an extensive commerce in lace, stockings, cutlery, and other merchandise of their own manufacture: but watch-making, and every branch of clock-work, are the articles in which they particularly excel. They not only make every utensil employed in those arts, but have invented several: and all sorts of workmen necessary for the completion of that branch of business, such as painters, enamellers, engravers, and gilders, are found in these villages; where, upon an average, about forty thousand watches are yearly made. The genius and industry, indeed, observable upon these mountains, exhibit a scene uncommonly pleasing. As every individual is sure, not only of obtaining a comfortable maintenance for himself, but also of soon placing his children in a way of procuring their own livelihood; the people marry very early.

Not many years ago, the greatest part of these valleys was almost one continued forest; but the wonder-

wonder-working powers of industry have happily changed the scene into flourishing villages and fertile pastures. The increase of population will appear from the following fact: Formerly the produce of the country was more than sufficient for the consumption of the inhabitants; at present, although considerably more cultivated, it scarcely furnishes an eighth part of the provisions necessary for interior consumption: the remainder is drawn from Franche Comté. And no wonder; for, beside the natural effect of their frequent and early marriages; every stranger, who brings a certificate of his good behaviour, is at liberty to settle, and to follow any trade, without the least restriction. Here, no apprenticeship is necessary; nothing is contraband; and industry exerts herself untaxed.

Beside those particular arts I have already mentioned, several inhabitants of Locle and La Chaux de Fond are well skilled in other branches of mechanical science, and have invented useful mathematical and astronomical instruments. Among those who have eminently distinguished themselves in this way, is the famous Jaquet Droz, who is now at Paris; and whose son exhibited in England several automatical figures of a very singular and surprising construction: one played upon the harpsichord; another drew landscapes;

scapes ; and, what is still more extraordinary, a third copied any word presented to it, or wrote down whatever was dictated by any of the company. These are certainly wonderful inventions, and seem to exalt the powers of mechanism ; but still they are mere toys, and an unworthy waste of great genius : it is Swift making riddles. How much more laudably, and with equal success, might the same talents and application have been exerted in improving, or adding to, those instruments and apparatus, which are necessary to the astronomer and natural philosopher !

The origin of watch-making in these parts, as related by Mr. Osterwald, the historiographer of these mountains, is extremely curious ; and the truth of his account was confirmed to me by several artists both of Locle and La Chaux de Fond. In 1679, one of the inhabitants brought from London a watch ; which being out of order, he entrusted it to Daniel John Richard, of La Sagne. Richard, after examining the mechanism with great attention, determined to attempt making a watch from the model before him : but to this end he was destitute of every other assistance than the powers of his own native genius. Accordingly he employed a whole year in inventing and finishing the several instruments previously necessary for his purpose ; and in six months

months from that period (by the sole force of his own penetrating and persevering talents) he produced a complete watch. But his ambition and industry did not stop here: beside applying himself successfully to the invention of several new instruments useful for the perfection of his work, he took a journey to Geneva, where he gained considerable information in the art. He continued for some time the only watchmaker in these parts; but business increasing, he instructed several associates; by whose assistance he was enabled to supply from his single shop all the demands of the neighbouring country. Towards the beginning of the present century he removed to Locle, where he died in 1741, leaving five sons, who followed their father's occupation. The knowledge and practice of the art gradually spread itself, and is now become almost the universal business of the inhabitants, and may be deemed the principal cause of the population observable in these mountains.

The inventive genius of this mechanical people is not merely observable in the above-mentioned articles, but discovers itself upon all occasions where it can be applied to the purposes of their convenience and accommodations. To give an instance: the rocks in most parts of the alps being exceedingly hard and solid, the waters
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usually make their way along their sides, and rush down in perpetual torrents: but the strata which compose the Jura being less firm and compact; the rains and melted snow penetrating into the crevices, form subterraneous channels, and issue in rivulets at the bottom of the mountains. Now the peasants, in order to avail themselves of this peculiarity, have, in the midst of these subterraneous channels, and with much labour, erected mills, which are turned by the descending torrents. For this purpose the builders have constructed wheels, in places where it seemed scarcely practicable; have invented new modes of scaffolding, and a great variety of other ingenious contrivances in order to facilitate their work.

The natives of these districts are exceedingly courteous to strangers who visit their country. They are in general very well informed in several branches of knowledge; and, as they usually employ their leisure hours in reading, many of the villages contain circulating libraries.

The houses are plaistered and whitewashed; though small, are commodious and well-built; and furnished with a degree of neatness, and even elegance, peculiarly striking in these sequestered mountains.

The rock which forms the base of the Jura,
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is mostly composed of calcareous stone; and perhaps there is no spot in Europe where are found so large a quantity of petrified shells and marine plants in so small a space. Near Locle I observed a ridge of hills, that seemed to consist entirely of *pierres arborisées*, or stones bearing the impression of plants.

In returning, we had a most sublime prospect of the lakes of Neuchatel, Bienne, and Morat, with the high and rugged chains of alps stretching from the cantons of Berne and Friburgh, as far as the Vallais, and the mountains of Chablais.

Such perfect ease and plenty reigns throughout these mountains, that I scarcely saw one object of poverty: the natural effects of industry under a mild and equitable government. It is of these vallies, and of their inhabitants, that Rousseau gives so enchanting a description in his letter to D'Alembert: to which I refer you.

I am, &c.

L E T T E R 47.

Government of Neuchatel.

BY the death of the duchess of Nemours, in 1707, the sovereignty of Neuchatel and Vallengin became vacant; and being claimed by Frederic the First, king of Prussia, as heir to the prince of Orange, his right was acknowledged by the states of the country. Upon his death it descended to his son Frederic William, who transmitted it with his other dominions to Frederic the Second.

The constitution of Neuchatel is a limited monarchy. The machine of this government is indeed actuated by such nice springs, and its wheels are so exceedingly complicated, that it is very difficult for a stranger to distinguish, with any degree of accuracy, the prerogatives of the sovereign, and the franchises of the people: particularly as some, even of their most important privileges, depend upon mutual acquiescence and immemorial custom, and not upon written laws. I shall endeavour, however, to trace the principal features of this government; the result of

my best inquiries during my continuance at Neuchatel.

Upon the accession of Frederic the First, certain general articles, which in a great measure established the prerogatives of the prince, and the liberties of the subject, were signed and ratified by the king. Beside these general articles, which his present majesty upon his accession promised to preserve inviolate ; others were added at the pacification of 1768 : which finished the dispute between the sovereign and subject. By this pacification, the king not only renewed his assent to the *general* articles ; but also explained them, wherever their tenor had been mistaken ; expressly confirming also several other privileges in favour of the people, which had hitherto been equivocal, or not duly observed.

The most important of these general articles are :

1. The sovereign promises to maintain the Reformed religion as by law established ; and to tolerate no other sect, except within the districts of Landeron and Cressier, where the Catholic religion is dominant.

2. No person but a native of the country is capable of holding any civil or military charge, excepting that of governor, who may be a foreigner ; and the same incapacity is extended even

to natives, who are in the service of a foreign prince.

3. All the subjects have a right to enter into the service of a foreign power; provided that power is not in actual war against the prince, as sovereign of Neuchatel: and if the sovereign should be engaged in hostilities, which do not concern Neuchatel, that state may continue neuter, except the Helvetic body should be involved in the contest *.

• The latter clause of this article is not so clearly worded as it might have been; from a delicacy, I suppose, of not expressly stipulating, that the state of Neuchatel and Vallengin may oppose their sovereign by arms, in case the Swiss should be engaged in any war against him. It is evident, however, that they consider their connection with the Helvetic body, as of superior obligation to that with their prince, as sovereign of Neuchatel and Vallengin.

The remarkable clause in question is as follows:

Et qu'en outre et conformément à des articles exprés et formels des franchises tant de la bourgeoisie de Neuchâtel que de celle de Vallengin, cet Etat ne puisse être engagé dans aucune guerre, ni les sujets d'icelui obligés d'y marcher, que ce ne soit pour la propre guerre du Prince, c'est à dire, pour la défense de l'Etat, et pour les guerres que le Prince pourroit avoir en tant que souverain de Neuchâtel et non autrement: en sorte que s'il avoit guerre pour raison de quelque autre Etat, terre et seigneuries, l'Etat de Neuchâtel ne soit point obligé d'y entrer; mais en ce cas devra demeurer dans la neutralité, à moins que tout le corps Helvétique en général n'y prit part et intérêt.

4. Justice

4. Justice shall be equitably administered: and, for this purpose, the three estates of Neuchatel and Vallengin shall be annually assembled.

5. The magistrates and officers of justice, instead of holding their employments during pleasure, shall enjoy them during their good behaviour. And, by the late pacification it was further agreed, that the prince is not himself the judge of their good behaviour; but that in order to be deprived of their places, they must be fully convicted of malversation in office, by certain judges at Neuchatel appointed for that purpose.

6. The sovereign shall take the accustomed oath upon his accession; and promise to maintain all the rights, liberties, franchises, and customs, written or unwritten.

It is remarkable, that one of the most essential rights of the subject, depends upon immemorial usage; for, that "the sovereign shall be considered as resident only at Neuchatel," is in the number of their unwritten immunities. Now this privilege, in conjunction with the third article just cited, forms the basis of their civil liberty. By the former, the prince, when absent, can only address his subjects through his governor and the council of state; and no subject can be

tried out of the country, or otherwise than by judges appointed by the constitution : by the latter, should the king of Prussia be at war with all Germany ; the people of Neuchatel and Vallengin are by no means obliged to arm in his defence ; but individuals may even serve against him, so long as the powers whom they serve, are not engaged in hostilities against their country *.

Beside these general articles, that comprehend the privileges of the people at large ; there are others which the sovereign is equally bound to maintain, relating to the town of Neuchatel and the district of Vallengin, in particular.

The prince confers nobility, nominates to the principal offices of state, both civil and military, and appoints the chatelains and mayors, who preside in the courts of justice. His revenues, which are very moderate, and scarcely amount to £. 5,000 a year, arise from certain demesnes ; from a small land tax ; from the tythes of wine and corn ; and from the tenth of the value on the sale of immoveables. With regard to commerce,

* When Henry duke of Longueville, and sovereign of Neuchatel, was, in 1650, sent to the castle of Vincennes, Felix de Mareval, captain of the Swiss guards, kept guard in his turn, though he was citizen of Neuchatel, at the door of the prison, in which *his sovereign* was confined.

no subject pays any duties either of importation or exportation, except for foreign wines imported into the town of Neuchatel.

During the absence of the prince, he is represented by a governor of his own appointing; who enjoys considerable honours, but is extremely limited in his authority. He convokes the three estates; presides in that assembly; and has the casting vote if the suffrages happen to be equal: he enjoys the power also, in criminal cases, of pardoning, or of mitigating the sentence. In the governor's absence his place is supplied by the senior counsellor of state.

The three estates of Neuchatel, form the superior tribunal of this country; and receive appeals from the inferior courts of justice. They are composed of twelve judges, divided into three estates: the first consists of the four senior counsellors of state, who are noble; the second, of the four chatelains of Landeron, Boudry, Val de Travers, and Thielle*; and in case of absence, their place is supplied by the respective mayors in the principality of Neuchatel, ac-

* The principality of Neuchatel is divided into a certain number of districts; some of which are denominated *chatellanies*, and others *mayoralties*. The chiefs of the former are called *chatelains*, and of the latter *mayors*: in every other respect their office and their power is the same.

cording to a regulated order ; the third is composed of four counsellors of the town of Neuchâtel. The judges in the first and second division hold their places for life ; those in the third are appointed annually. This body ordinarily assembles every year in the month of May ; but is convoked extraordinarily upon particular occasions : the town of Neuchâtel is always the place of meeting.

These three estates are not the representatives of the people ; nor do they possess the legislative authority. They are, properly speaking, the supreme court of judicature, which receives all appeals, and decides finally all causes, even those relating to the sovereignty of the country : a power which they exercised in the year 1707, upon the extinction of the direct line in the person of the duchess of Nemours.

It may be here not unworthy of remark, that the three estates decided the famous cause of the succession in 1707, as a process between the several claimants of the sovereignty. But if (in failure of claimants) a new sovereign was to be chosen, or a new form of government to be established ; this would no longer be considered as amenable to a court of judicature : the question would then come before the people assembled by means of their representatives.

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The council of state is invested with the ordinary administration of government; superintends the general police; and is entrusted with the execution of the laws. The members nominated by the sovereign are not limited to any particular number. The prince exercises his authority by means of this council, in which he is always considered as personally presiding; and the power of the president is only to convoke the assembly; to propose the subject of their consideration; to collect the votes; and to decide when the voices are equal. The ordinances of this council are previously communicated to the *ministres* of Neuchatel, who are to certify, that they contain nothing contrary to law.

The town of Neuchatel enjoys very considerable privileges: it has the care of the police within its own district, and is governed by its own magistracy, consisting of a Great and Little Council. I will not trouble you with a detail of the several departments; but I cannot omit mentioning the *ministres*; because the members of that body form the third estate on every act of legislation. The *ministres* are a kind of committee from the council of the town, and are entrusted with the administration of the police. They consist of the two presidents of that council, four master-burghers drawn from the Little

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Council,

Council, and the *banneret* or guardian of the people's liberties. The six former are changed every two years; the banneret is chosen by the general assembly of the citizens, and continues in office during six years.

The legislative authority is divided in so complicated a manner, that it would be no easy task to determine precisely where it absolutely resides: perhaps the following account of the persons concerned, and of the forms observed, in enacting and promulgating laws, may somewhat assist in clearing the difficulty.

As soon as the causes are decided by the three estates assembled in the month of May; the four judges, who form the third estate, retire; and their place is supplied by the four *ministres*. The attorney-general then desires the members of the three estates to take into consideration, whether it is necessary to frame any new laws. If a new ordinance is proposed; a declaration is drawn up, and delivered to the council of state for their deliberation, whether it is contrary to the prerogatives of the prince, or to the rights of the subject: from thence it is communicated to the council of the town, in order to be examined, whether it infringes the privileges of the citizens. If adopted by the council of state, and the council of the town, it is proposed to the prince for
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his approbation or rejection : in the former case, it is again publicly read before the three estates ; and the governor, or president, declares the approbation of the sovereign. It is then promulgated, or, as the expression is, passed into a law by the three estates.

Since the accession of the house of Brandenburg, the people of Vallengin are always consulted upon the framing of a new law. For this purpose the three master-burghers of Vallengin examine, whether it contains any thing inconsistent with the franchises of that district ; in which case they have the power of remonstrating to the governor in council.

From this detail it should seem, that the legislative authority resides conjunctively in the prince, the council of state, and the town ; that the people of Vallengin have a kind of negative voice ; and that the three estates propose and promulgate the laws.

Every year, at the conclusion of the assembly of the three estates of Neuchatel ; those of Vallengin, as constituting the supreme court of judicature for that country, meet at Vallengin, and decide finally all appeals from the inferior courts of justice. The *first* of these three estates is formed by the same four noble and senior counsellors of state, who sit in the first of the
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three estates of Neuchatel; the *second* by four mayors of the county of Vallengin; and the *third* by four members of the court of justice of Vallengin, nominated by the mayor of Vallengin. The governor, or, in his absence, the senior counsellor, presides, as in those of Neuchatel. The three estates of Vallengin have no interference in any act of legislation: the laws which have been framed or amended at Neuchatel, in the manner abovementioned, being simply remitted to them by the solicitor-general, and publicly read before them.

The people of Vallengin assemble every three years in an open plain, in order to elect their three *master-burghers*, who are respectively chosen from the inhabitants of the burgh of Vallengin, of the Val de Ruz, and of the mountains. The function of these master-burghers is to watch over the general interests of the people: they are also in some cases deputed to Neuchatel by the people, whenever they are summoned by the governor and council of state, in relation to any affair which particularly concerns their county.

The principality of Neuchatel and Vallengin is divided into a certain number of districts, each of which has its criminal court of justice. The great circumspection observed in the judicial proceedings,

proceedings, may sometimes favour the escape of the criminal: but the few instances of atrocious crimes, prove that this humane caution is no encouragement to transgressors; and is a strong presumption of the general good morals which prevail among the people. In a word, personal liberty is almost as tenderly and as securely protected by the laws of this country, as by those of our own invaluable constitution.

When the criminal is arrested, he is immediately brought to trial: after which, the sentence is read to him in prison. The next morning he again appears before the judges, assembled in the *open air*; the former proceedings on the trial are read, and the judges once more deliver their opinion. In capital sentences, the governor is instantly acquainted with the circumstances of the crime: and if he does not remit or soften the punishment, the sentence is immediately executed. I am concerned to add, that *torture* (though seldom used) is not absolutely abolished.

Such are the general outlines of this remarkable constitution, by which the liberties of the people are as well, and perhaps better, secured than even in the democratical cantons; for, although

though the most despotic prince in Germany is sovereign, his power is exceedingly limited. Among the striking circumstances which characterise this government, must be mentioned the very liberal encouragement given to strangers, who settle in the country. They enjoy every possible privilege of trade and commerce; and in no state are fewer essential distinctions made between strangers and natives. I have already observed to you, the good effects of this enlarged policy on the population of Neuchatel and Vallengin: whereas a narrower and more contracted principle in some of the neighbouring Swiss cantons, has occasioned, and continues to occasion, a very manifest decrease of inhabitants.

LETTER

L E T T E R 48.

Route from Pontarlier to Neuchatel — Valley of Travers—Anecdotes of Rousseau—Isle of St. Peter, in the Lake of Biene.

Neuchatel, October 1785.

I Now write to you a second time from Neuchatel, at the interval of nine years since the date of my former letters. On the preceding occasion I went from Granson to Neuchatel; to-day I came from Pontarlier, a small town in Burgundy, which is the usual route of those who enter Switzerland on this side.

From Pontarlier I ascended gently by the side of the Dou, here a small rivulet bubbling in the vale, quitted that stream, and passed under a bold rock, on which stands the castle of Joux forming a picturesque landscape. This castle has a garrison of invalids, and commands the narrow valley leading into Burgundy. Near it the road is divided into two branches; one leads directly to Joigne, and the other to Neuchatel. In about two hours we observed a stone, which separates France from the county of Neuchatel.

Soon

Soon afterwards we mounted an eminence, looked down upon the beautiful valley of Travers; descended to a narrow pass, which is guarded by a chain fastened to the rock, bearing the date of 1722. History, however, makes mention of this pass, and of a similar chain, at a much earlier period; particularly in 1476, when Charles the Bold, having ineffectually attempted to force it, marched with his army to Joigne, and besieged Granfon, where he was defeated.

Having descended to St. Sulpice, I visited the source of the Reus, which issues at the foot of a rock in five copious springs, that form a large body of water, and turn several mills. I was accompanied to this picturesque spot by an inhabitant of Fleurier, a neighbouring village: speaking of the increase of industry in these parts, he informed me, that about thirty years ago Fleurier contained only three watchmakers, whereas at present above a hundred were settled in that place. He added, that notwithstanding the constant influx of strangers, hands were still wanting for the numerous trades, which are carried on with great success in these parts.

I continued along the high road leading to Neuchatel, through the beautiful and romantic valley of Travers, watered by the Reus, abounding

ing in the most fertile pastures, bordered by hills gently rising from the banks of the river, and beautifully sprinkled with wood. I travelled through many neat villages, particularly Bouveresse, Couvet, Travers which gives its name to the whole valley; and Noirague, where I quitted the valley, and entered a narrow pass called *Clusette*. From hence the road traverses an abrupt and woody country along the sides of precipices, the Reus rolling beneath in a deep channel. At the small village of Brot, a pleasing view of the lake of Neuchatel and the adjacent country opened gradually, as I descended, and joined the road leading from Granson to Neuchatel.

I did not quit the valley of Travers without paying a visit to Moitier Travers, rendered memorable by the residence of Rousseau, who being, in 1762, driven first from Geneva, afterwards from Yverdon by the government of Berne, found a refuge from civil and theological persecution in this secluded valley, under the protection of Lord Keith, governor of Neuchatel. The dwelling-house of this singular man, is a small wooden building at the further extremity of the village, near the road which leads to Fleurier, and is now occupied by Mr. Martinet, mayor of the valley, a sensible old gentleman, who lived

in habits of great intimacy with the philosopher of Geneva.

The room chiefly occupied by Rousseau, is a small bed-chamber, which, out of respect to his memory, is left in the same state as when he lived there. In a corner near the window, he had made a kind of recess formed by two book-cases, and a simple deal plank which reached from one book-case to the other, and on which he was accustomed to write. Rousseau admitted company into this room; but into this recess he suffered no one to enter, from a suspicion, that they would overlook his papers when he was writing. He used also to frequent a small open gallery in the front of the house, the extremities whereof he had enclosed with planks, in which were peep-holes for the purpose of reconnoitring those persons who came to visit him, that he might give his orders whether they should be admitted or refused. Here he walked and read.

During his residence at Moitier, from 1762 to 1765, by frequently sauntering into the fields and neighbouring mountains, he acquired a taste for the study of botany, which he never intermitted, and which he always styled his peculiar delight. During this period of his life, he issued from this secluded corner his *Lettre à l'Arche-*

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veque de Paris, his *Lettres ecrites de la Montagne*, and some other works; in which he displays those wonderful powers of invention and description, that fascinating yet declamatory eloquence, that glow and animation of style, that fondness for paradoxes, that reverence for the scriptures and yet those perverse doubts of their authenticity, those liberal yet levelling principles of government, that keenness of irony, and that motley mixture of sophistry and argument, which checker and characterise all his writings.

Rousseau, on his arrival at Moitier, appeared in a common dress; but soon afterwards assumed an Armenian habit; either, as he himself alleged, because that mode of clothing was adapted to the disorder with which he was afflicted; or from that affectation of singularity, which seems to have marked his character, in every period of his life. Through Lord Keith's intercession, the king of Prussia offered to Rousseau a pension of £. 100 per annum, which he declined, from his aversion to the least shadow of dependence; preferring to copy music for his livelihood, rather than to accept an obligation even from so great a sovereign; and he used to boast, that he could daily earn a guinea by that occupation.

Rousseau took his repasts usually alone; though he would sometimes, but very rarely, ac-

cept an invitation from M. Martinet to dinner or supper; and particularly when Lord Keith passed a week at Moitier Travers for the purpose of visiting him. On these occasions he was remarkably agreeable and lively; being naturally of a social disposition, he conversed with great spirit and animation, and yet with as much correctness, as if he was dictating for the press.

Rousseau seems to have trusted entirely to his own judgment; being so impatient of contradiction, that he would never listen to the admonition of his friends, and seldom asked advice with an intention of adopting it. Having finished his celebrated Letter to the Archbishop of Paris, he read it to a person, from whom I received the anecdote, and demanded his advice relative to its publication. The person, though struck with the fire and spirit of the raillery, yet could not avoid representing to him, that his letter, however forcibly written, would never make a convert of the Archbishop; that he would only be entangled in endless controversies, and draw upon himself much obloquy and ill-will. "Your advice, returned Rousseau calmly, is a little too late; it is already published:" and immediately presented to him a printed copy of the letter, which he had just read to him in manuscript.

He derived from nature an extreme sensibility which bordered upon weakness; he seems to have wanted one proof of a great mind, that of receiving an obligation, and to have possessed such pride and soreness of temper as rendered it impossible to serve him; for he frequently construed a benefit into an injury. His extreme sensibility was irritated and augmented by a troublesome and painful disorder, which preyed upon his constitution, and at times rendered him unfit for society. And to this complaint, in conjunction with that merciless persecution which he repeatedly endured, should be attributed in a great measure the recluseness of his life, and that suspicious mistrust which occasionally bordered upon madness.

Rousseau had now continued three years at Moitier, greatly delighted with his situation, when an unexpected event induced him to quit a retreat, in which he wished to pass the remainder of his days. This event has been variously related. Some authors assert, that the populace, incited by the minister of the parish, in consequence of the scepticism displayed in his *Lettres Ecrites de la Montagne*, assembled in crouds, broke the windows of his house, forced open the door, and entering his bed-chamber, treated him with such violence, that he escaped with difficulty; and, not to be-

come a martyr to his opinions, quitted the country. Others on the contrary maintain, that neither the minister nor the natives were exasperated against him; that his housekeeper, the same person whom he afterwards married, disgusted with the inhabitants, broke the windows, and persuading her master, that he was in danger of being assassinated, so worked upon his apprehensions, that he quitted Moitier the next morning; and as a proof of this assertion, they affirm, that one of the stones found in the apartment was too large to have passed through the broken panes of glass.

The truth, however, seems to be, that his pride and suspicious temper had rendered him obnoxious to many of the inhabitants; that the scepticism and infidelity of his religious opinions, in his *Lettres Ecrites de la Montagne*, had raised a party against him; that some of the people would occasionally insult him; that the minister of the parish summoned him before the consistory; that he declined appearing; that the council of state at Neuchatel had proposed condemning the abovementioned publication, and had even applied to the king of Prussia for that purpose. Frederic, in an answer, which does honour to his head and his heart, while he permitted them

them to use any precautions which might tend to prevent the spreading of sceptical opinions, yet wisely forbade all persecution, and ensured to Rousseau a secure retreat at Moitier under his immediate protection. Before this answer was returned, some of the populace, intoxicated with liquor, threw stones against Rousseau's windows with such violence as to penetrate into the kitchen, and to tear off the plaister from the walls; but it is certain that none of these stones did, or could, enter his bed-chamber, as that apartment was situated on the other side of the house. This violence, however, exaggerated by the real or pretended terrors of his housekeeper, was sufficient to alarm Rousseau: on the next morning he retired from Moitier, and took refuge in the island of St. Peter.

The island of St. Peter, sometimes called the island of La Motte, and sometimes Rousseau's island, lies towards the southern extremity of the lake of Bienne. To this delightful spot I made an agreeable excursion on the fourth of October 1786, in company with the Rev. M. de Meuron, of Neuchâtel, and three English gentlemen. We quitted Neuchâtel in the morning; passed through St. Blaise and the district of Landeron, and embarked at Neuville, a small town, which, like Bienne, acknowledges the bishop of Basle for its

liege lord, but possesses such rights and immunities as render it an independent republic. It contains about twelve hundred inhabitants. The fine weather, and the clearness of the air, enabled us to enjoy the mild beauties of the view as we sailed to the island. To the south-west we discerned Neuville and its antient castle, and to the south-east we admired the Julimont, an insulated hill adorned with woods of oak, the summit of which is frequently visited by travellers for the beauty of the prospect; and its name has been derived by fanciful antiquaries from Julius Cæsar. At the extremity of a rocky and woody promontory, which stretches from the foot of the Julimont into the lake, stands the castle of Cerlier, and beyond, at some distance, the fertile plains watered by the Thiele.

We landed on the south side of St. Peter's island, and walked through an agreeable meadow skirted with vineyards to a large farm-house, which was formerly a convent *, and is now inhabited by the steward of the general hospital at Berne, to which the island belongs.

The island is about two miles in circumference, and richly wooded with various shrubs and trees, particularly with large oaks, beech, and Spanish chestnuts. Its surface is gently undulating; the

* It was secularised at the reformation.

southern shore, covered with herbage, forms a gradual slope to the lake; the remaining borders are steep and rocky: in a few places their summits are thinly fringed with shrubs; in others their perpendicular sides are clothed to the water's edge with hanging woods. The views from the different parts of the island are beautiful and diversified; that to the north is the most extensive and pleasing. It commands the lake of Bienne, which is of an oval form; its cultivated borders spotted with villages and castles, with the towns of Nidau and Bienne standing on the farther extremity. Agreeable walks are carried through the woods, and terminate at a circular pavilion placed in the center of the island. During vintage particularly, and on Sunday, which is the usual day of festivity, the island is filled with parties who take refreshments at the farm-house, stray about the woods, or dance in the circular building, and animate these romantic but solitary scenes.

Rousseau occupied an apartment in the farm-house, the only dwelling in the island. He lived with the steward and his family, who are the present inhabitants. The woman informed me, that he paid for his board and lodging forty shillings a month, that he usually rose at six, dined with the family at twelve, and after a slight supper retired

retired to rest at nine. She added, that he was extremely cheerful and agreeable; conversed with the family with the greatest ease and complacency, and conformed to their hours and manner of living; that he amused himself entirely in wandering about the woods, and searching for plants, which he used to explain to them with singular satisfaction. Rousseau mentions his residence in this delightful island with the highest terms of rapture, and his usual proneness to exaggeration.

“ I was permitted to remain only two months in this delightful island; but I could have passed there two years, two centuries, all eternity without suffering a moment's *ennui*, although my whole society consisted of the steward and family, good but plain people. I esteem these two months as the most happy period of my life; and so happy that I could have passed my whole existence without even a momentary wish for another situation *.”

If we examine in what this *extreme* happiness consisted; he himself informs us, that his principal occupation was in *doing nothing*. He did not even unpack his books, and could scarcely prevail on himself to read, much less to answer

* See Promenade V.

any letters. He assisted the steward and his servants at work in the vineyards and fields; sauntered about the woods, and gave himself up entirely to botany. He proposed to write a *Flora Petriuscularis*, or a description of the plants in the island; adding on this head, that as a German had published a book on the kernel of a lemon, in the same manner he would compose a treatise on each species of grass, moss, and lichen; and that he would not leave the most minute particle of vegetation undescribed. He made occasional excursions on the lake, sometimes coasting the sandy banks of the island; at other times suffering the bark to float without direction into the middle of the lake: then, to use his own expressions, "he would lie down in the boat, look up to the heavens, and continue in that posture for several hours, enjoying a thousand unconnected and confused, but delicious, reveries." He frequently rowed to a small sandy island, which he describes as a most beautiful spot. It was one of his great amusements to people this little island with rabbits; and as he was conveying, with great pomp, the steward's family to be present at the foundation of this little colony, he describes himself as *equally elated with the pilot of the Argonautic expedition.*

From

From these simple avocations and *every day* occurrences, which Rousseau relates with that enthusiasm and those sentiments peculiar to himself, he draws the following sublime morality.

“ I have remarked, during the vicissitudes of a long life, that the most delightful enjoyments and most rapturous pleasures, are not, upon recollection, those with which I am most affected. Such fleeting moments of passion and delirium, however rapturous, are, from their very nature, but thinly scattered in the path of life. They are too rare and rapid to constitute a fixed state; and the happiness which my heart regrets, is not composed of fugitive instants, but consists in a simple and permanent state, without rapture, the duration of which increases the charm, till it finds supreme felicity.”

This state he describes himself as possessing during his short continuance in the island of Bienné; a longer residence would probably have dissolved the charm, which was raised by his own heated imagination. That restlessness of temper, which is usually the attendant of great genius, and which was his inseparable companion, would have probably returned, and embittered the delightful calm which he describes with such rapture and exstasy. But he had not time to become disgusted with his situation: for the same
intolerant

intolerant spirit which had hitherto pursued him, followed him even to this sequestered island; and he had scarcely passed two months, before he received an order from the government of Berne to depart from their territories. Rousseau was so shocked at this unexpected command, that he petitioned to be imprisoned for life, only requesting the use of a few books, and that he might be occasionally permitted to walk in the open air. Soon after this extraordinary request, which shews the extreme agitation of his mind, and which cannot but interest every feeling mind, he reluctantly quitted the island. It does not fall within the compass of a letter to dwell upon this singular man through the subsequent events of his life, or even accompany him to England, where, notwithstanding the most distinguished reception, the same perverseness of disposition, and the same excessive delicacy, rendered him no less unhappy, than when he was under the pressure of real calamities, and exposed to reiterated persecutions.

I am, &c.

LETTER

L E T T E R 49.

Environs of Morat—Mount Vuilly.

IN our way to Morat and Avenches we crossed the river Thiele, which issues from the lake of Neuchatel, discharges itself into that of Biemme, and separates the principality of Neuchatel from the canton of Berne.

Morat is a bailliage belonging to Berne and Friburgh: the reformation was introduced in 1530, by the majority of voices, in presence of deputies from Berne and Friburgh. The free spirit of the Swiss governments is in no instance more remarkably apparent, than by the mode which they observed in embracing, or rejecting, the reformation; as, in many other towns beside Morat, the question was put to the vote; and the minority generally submitted, with perfect acquiescence, to the decision of the greater number.

Morat stands pleasantly upon the edge of a small lake, about six miles long, and two broad, in the midst of a well-cultivated country. The lakes of Morat and Neuchatel are parallel to each other, and separated only by a ridge of hills: the former is the most elevated; for, it discharges

charges itself by means of the river Broye, into the latter. According to Mr. de Luc, the lake of Morat is fifteen French feet above the level of that of Neuchatel. Both these lakes, as well as that of Bienne, formerly extended much farther than their present limits: and, from the position of the country, appear to have been once united.

Mr. Pennant informs me, that "the vast fish called the *silurus glanis*, or the *saluth*, which frequents the lakes of Morat and Neuchatel, has not been caught here in the memory of man. It is well described, and finely engraven, in Doctor Bloch's History of Fishes, vol. i. 194. tab. 34. In the time of Gesner two were taken, one of which was eight feet long; but they are sometimes so large as to weigh six hundred pounds. It is an eel-shaped fish, very smooth, round and thick, and has a great head. The mouth is furnished with four short, and two very long, whiskers. It is very inactive and slow in its motions, and loves the deep and muddy parts of the lakes. They are found in many of the great fresh waters of Europe, and abundantly in the Volga."

On my subsequent expeditions into these parts, I examined with greater attention the environs of Morat, during several days, which I passed most agreeably at Coujouvaux, a seat belonging

to

to the count of Diesbach, and at Grens with M. de Garville, a French gentleman, who is so much attached to the beauties of this delightful country, that he has built a villa in a pleasing situation near the banks of the lake of Morat, where he comes every year from Paris to pass the summer. By these families I was received without any other introduction, than as being the author of the Letters on Switzerland, and with that frankness and cordiality so flattering to a stranger. I found the environs of Morat, though not so wild and romantic as many other parts of Switzerland, yet extremely desirable for a constant residence.

I made several excursions across the lake, to an insulated ridge between the lakes of Neuchatel and Morat, and enjoyed many delightful points of view. Of these various prospects, the most remarkable is from the summit of Mount Vuilly, where I seated myself on the edge of an abrupt precipice. From thence I looked down upon the lakes of Bienne, Morat, and Neuchatel; observed the Broye entering the lake of Morat, issuing from thence and winding through a marshy plain into the lake of Neuchatel; the Thiele flowing from the latter, and hastening to fall into the lake of Bienne; the fertile and variegated countries encircling those bodies of water; and the grounds rising in regular gradations
from

from plains to alps. But what renders this charming spot more particularly striking is, that it is perhaps the only central point from which the eye can at once comprehend the vast amphitheatre formed, on one side, by the Jura stretching from the environs of Geneva as far as Basle, and, on the other, by that stupendous chain of snowy alps, which extends from the frontiers of Italy to the confines of Germany, and is lost at each extremity in the boundless horizon.

Impressed with this sublime view, I cast my eyes downwards over that dead and extensive morass through which the Broye serpentine; and cried out in the language of poetry, which knows how to animate the dullest objects :

*Quittons les bois et les montagnes
Je vois couler la Broye * à travers les roseaux.
Son onde partagée en differens canaux
S'égare avec plaisir dans de vertes campagnes,
Et forme dans la plaine un labyrinthe d'eaux.
Rivière tranquille et chérie
Que j'aime à suivre tes détours !
Ton eau silencieuse en son paisible cours,
Présente à mon esprit l'image de la vie ;
Elle semble immobile, et s'écoule toujours.*

* From a poem, entitled "*La vue d'Anet.*" I have followed the example of M. Sinner, in his *Voy. Hist. et Pol. de la Suisse*, who substitutes the Broye for the Thiele, to which the lines in the original are applied.

L E T T E R 50.

Battle of Morat—War between the Swiss and Charles the Bold, Duke of Burgundy—Its Consequences.

MORAT is celebrated for the obstinate siege it sustained against Charles the Bold, duke of Burgundy, which was followed by the battle of Morat, fought on the 22d of June 1476. In this famous engagement the duke was routed, and his whole army almost entirely destroyed, by the confederate troops of Switzerland. Not far from the town, and adjoining to the high road, a monument of this victory still remains: it is a square building, filled with the bones of the Burgundian soldiers, who were slain at the siege and in the battle. To judge from the quantity of these bones, the number of the slaughtered must have been considerable. Among several inscriptions in the Latin and German languages, relative to that memorable victory, I transcribed the following on account of its conciseness:

Deo

*Deo Opt: Max:
Caroli Inclyti et Fortissimi
Burgundiæ Ducis Exercitus
Muratum obsidens ab Helvetiis
Cæsus hoc sui Monumentum reliquit.
Ann: 1476.*

This war, which Charles the Bold carried on against the Swiss with a temerity peculiar to himself, forms a remarkable æra in the history of this country; and was attended with some very extraordinary circumstances. From the time of the famous revolution in 1308, which gave rise to the Helvetic confederacy, to the end of the following century, the Swiss republics deprived the House of Austria of all its territories situated in Switzerland; and continued in possession, notwithstanding the various attempts of the different dukes to recover their lost domains. But of all the princes of that House, Sigismond the simple, archduke of Austria of the branch of Tyrol, was more particularly engaged in hostilities with the Swiss cantons, and their allies: for, his hereditary dominions in Suabia and Alsace bordering upon Switzerland, induced him to enter more frequently into these disputes, than the other branch, which was in possession of the imperial throne.

In the course of these hostilities, Sigismund was compelled to cede a considerable part of his territories to the Swiss republics; particularly the rich country of Thurgau to the seven cantons, which at that period composed the Helvetic league*. Inflamed by these repeated losses, and the humiliating conditions of peace he was constrained to accept in 1468, he endeavoured to engage some of the neighbouring powers in a confederacy against the Swiss cantons. Having first ineffectually applied to Louis the Eleventh king of France, he at length addressed himself to Charles the Bold, duke of Burgundy.

Charles having succeeded to the possession of Franche Comté, Burgundy, Artois, and Flanders, together with the greatest part of the United Provinces; possessed as ample revenues, and as extensive territories, as the most potent sovereign of his time. Magnificent, impetuous, and enterprising, he neglected no opportunity of aggrandising his power, and set no bounds to the projects of his restless ambition. He had formed the plan of erecting Burgundy into a monarchy; and had already in imagination appropriated to

* Berne obtained the co-regency of Thurgau at the peace of Arau, 1712.

himself Lorraine and part of Switzerland; which he proposed to annex by conquest to his hereditary dominions.

A prince of such a character being naturally well disposed to listen to any overtures, or to undertake any war, that might advance his ambitious schemes, received with eagerness the propositions of Sigismond; he flattered that credulous prince with the hopes of receiving in marriage his daughter Mary, heiress of his extensive dominions; and prevailed upon him, by the loan of eighty thousand florins, to surrender Sundgau, Alsace, Brisgau, and the four Forest-towns; promising, upon the repayment of that sum, to restore the said provinces.

By this alliance, Sigismond acquired a sum of money to assist him in his preparations against the Swiss; protected, as he thought, his hereditary dominions from their enterprises; and secured a powerful ally against the antient enemies of his family. The reverse, however, proved to be the event: for, by a strange fatality, this league, which was intended to cement the union of the two princes, served only to divide them; and occasioned the first perpetual alliance between the Swiss cantons and a prince of the House of Austria.

Charles, upon the conclusion of this treaty, informed the cantons, that he had taken Sigismond under his protection, and would defend him to the utmost of his power. Meanwhile, the bailifs, whom he placed over his newly acquired territories in Alsace, oppressed the people; laid embargoes upon the commerce of Mulhausen, a confederate of the cantons; and withheld the rents of the estates belonging to the Swiss in Sundgau and Alsace.

These grievances being laid before Charles in an embassy, which Berne dispatched to his court in the name of the confederate cantons, the duke received it with haughtiness; and after compelling the deputies to kneel while they delivered their remonstrance, dismissed them without an answer. This disdainful and ignominious treatment was ill brooked by a free people, unaccustomed to crouch before the insolence of power; and the warmth of their just indignation was still more inflamed by the artful policy of Louis the Eleventh, who, jealous of the duke of Burgundy's power, entered into a defensive alliance with the Swiss republics, in order to counteract the designs of that ambitious prince.

But Louis still further strengthened the Swiss, by effecting a reconciliation between them and Sigismond. The latter had no sooner surrendered

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ed to Charles Sundgau, Alsace, and the other dominions, than he began to be sensible of his error. The duke of Burgundy not only oppressed his new subjects, but seemed determined, even should the eighty thousand florins be repaid, to keep possession of these conditional territories, and did not appear inclined to fulfil the promise of bestowing his daughter upon the archduke. From these considerations, Sigismond, induced through the mediation of Louis, to throw himself under the protection of the Swiss, concluded the famous treaty, which was confirmed at Lucerne in 1474, and is called the *hereditary union*; an appellation appropriated to the treaties between the Swiss and the House of Austria. Sigismond renounced all right to the provinces which the Swiss had conquered from the House of Austria: the two contracting parties formed a defensive alliance; and engaged to guarantee reciprocally each other's territories. Thus the Swiss, after having deprived Sigismond of all his possessions in their country, engaged to support his title to those very provinces, which he had mortgaged in order to strengthen his arms against themselves; and Sigismond accepted a guarantee from the most inveterate enemies of his family.

This treaty, which entirely changed the policy of the Swiss republics, was solely contrived by the artful intrigues of Louis the Eleventh: the jealousy of that designing monarch turned into another channel the vast preparations of the duke of Burgundy; preparations which would probably have been attended with more success, had they been directed against France.

Charles too late perceiving the imprudence of his conduct towards the Swiss republics, in vain exerted all his efforts to engage them in a neutrality. They rejected his proposals of reconciliation with firmness; prepared, with their usual vigour, for a war, which now appeared inevitable: and even advanced the eighty thousand florins to Sigismond, who demanded the restitution of his lands, which the duke of Burgundy evaded under various pretexts. The latter having concluded a separate peace with Louis, turned his whole force against the Swiss, entered their country with an army of sixty thousand men; and, laying siege to Granson, carried it by assault. But his success ended there: for, at the subsequent battles of Granson and Morat, he was totally defeated, and his attempts upon Switzerland entirely frustrated*. Nevertheless, his restless

* Charles entered Switzerland confident of subduing that country.

less and ambitious spirit still unsubdued, impelled him to attack the duke of Lorraine. But that prince, having engaged in his pay a body of

country. The effect which this unexpected and humiliating disappointment had upon his spirits and constitution, is related by Philip de Comines, with his usual minuteness, in his Memoirs addressed to Angelo Cattho, archbishop of Vienne in Dauphiné. His account is curious, and will give some idea of the violent and impetuous character of Charles :

“ His concern and distraction for his first defeat at Gran-
“ son was so great, and made such deep impresson on his
“ spirits, that it threw him into a violent and dangerous fit
“ of sickness : for, whereas before, his choler and natural
“ heat was so great, that he drank no wine, only in the
“ morning he took a little tisane, sweetened with conserve
“ of roses, to refresh himself : this sudden melancholy had
“ so altered his constitution, he was now forced to drink the
“ strongest wine that could be got, without any water.
“ And, in order to draw the blood from his heart, some
“ burning tow was put into the cupping-glasses, and ap-
“ plied to his side. But this, my lord of Vienne, you know
“ better than I ; for, your lordship attended on him during
“ the whole course of his illness, and spared no pains that
“ might contribute to his recovery : and it was by your
“ persuasion that the duke was prevailed upon to cut his
“ beard, which was of a prodigious length. In my
“ opinion his understanding was never so perfect, nor his
“ senses so sedate and composed, after this fit of sickness, as
“ before.”

Uvedale's Trans. Vol. I. p. 423.

eight

eight thousand Swiss, obtained a complete victory, near Nancy, over Charles, who was slain in the engagement *.

His death terminated this bloody war; in which the Swiss gave the most distinguishing proofs of invincible valour, and spread the fame of their military virtues throughout all Europe, but from which they obtained no solid advantage †. In fact, the principal and almost sole

* The death of Charles at the battle of Nancy, was attended with some very extraordinary circumstances; for the particulars of which, see the curious account, extracted from Philip de Comines, and the *Chronique Scandaleuse* of John de Troyes, in Wraxal's interesting *Memoirs of the Kings of France of the House of Valois*.

† “ And what,” says Comines, “ was the occasion of this war? It was begun on account of a waggon of sheepskins, which the lord of Romont took from a Swiss, who was passing through his territories. If God had not abandoned the duke, it is not probable, that he would have put himself into so much danger for so trifling a circumstance; considering the offers that were made to him; against what sort of people he was engaged; and from whence neither profit nor glory could accrue to him. For, the Swiss were not in such repute, as they are in at present, and nothing could be poorer: insomuch that one of their ambassadors, as he was endeavouring to prevent the duke from engaging in that war, remonstrated; that he could gain nothing by attacking them: for, their country was so barren, that the spurs of his troops and the bits of their horses were worth more, than could be furnished by all the Swiss territories, in case they were conquered.”

benefit accrued to Louis the Eleventh ; as by the death of Charles, he not only was released from a dangerous and enterprising rival, but also annexed the rich provinces of Burgundy and Artois to the crown of France.

But, although the immediate advantages which the Swiss derived from the death of Charles, were unimportant ; yet the consequences operated very considerably on their future politics. Mary of Burgundy, the only surviving child and heiress of Charles, married the archduke Maximilian, eldest son of the emperor Frederic the Third, and afterwards emperor himself. By this marriage, the House of Austria acquired possession of the Netherlands ; and having frequent disputes with France, the alliance of the Swiss was strenuously courted by both parties. Thus this country, being secured from all invasions, acceded as occasion offered to the two rival powers ; and assisted each party by turns, as the intrigues, or rather as the subsidies, of the one or the other prevailed.

These intrigues gave rise to different alliances, contracted with the House of Austria, the kings of France, the pope, and the dukes of Savoy and Milan.—But, not to enter more minutely into their history, I will only observe in general, that hitherto the Swiss had acted with great disinterestedness

interestedness in all their treaties, and had never taken the field but either to secure their liberties, or to drive their enemies from Switzerland. It was about the period of the Burgundian war, that the subsidies which they obtained from Louis the Eleventh, taught them the disgraceful arts of mercenary politics; as the rich plunder which they took from the duke of Burgundy gave, in some measure, the first taint to their original simplicity of manners; till at length, *Swiss venality* has become a proverbial expression.

I am, &c.

LETTER

L E T T E R 51.

Antiquities of Avenches.

F E W antient towns have occasioned more controversy among antiquarians, or given rise to such a variety of conjectures concerning its origin and importance, as Avenches, the principal burgh of a bailliage in the Pays de Vaud. Some contend that it was the capital of all Helvetia; because Tacitus calls it *Aventicum gentis caput*: while others have endeavoured to prove, that by this expression the historian intended only to denote the capital town of its particular district. Agreeably to some accounts, the city was built, and a Roman colony founded, by Vespasian: with more probability, according to others, it was only repaired and beautified by that emperor, after it had been laid waste, and almost ruined, by Vitellius.

Without entering however into dry and uninteresting discussions, it was formerly a very considerable town, and under the dominion of the Romans; as appears not only from several milestones,

stones, found in many parts of the Pays de Vaud, most of which are numbered from *Aventicum*, as the principal place of reference; but more particularly from the present ruins. I shall slightly mention a few of these ruins, merely to shew you, that the inhabitants do not boast of their antiquity without sufficient evidence.

We traced the site of the antient walls, which appear to have enclosed a space near five miles in circumference. The present town occupies but a very inconsiderable part of this ground; the remainder is covered with corn-fields and meadows. One of the antient towers still exists: it is a semicircular building, with the convex side turned towards the town.

We next examined a coarse mosaïc pavement, discovered some years ago in ploughing a field. Being now enclosed by a barn, which is let to some peasants, the ignorant occupiers are taking the most effectual method to destroy it, by employing it as a drying-house for tobacco, and by suffering strangers to take away specimens. Even the government of Berne was so insensible of its value, that they permitted the count of Caylus to remove a pannel, containing the figures of two Bacchanalians.

This mosaïc was the floor of an antient bath, and is about sixty feet in length and forty in breadth:

breadth: the general form is perfect; and, although several parts are broken and lost, yet from the present remains the configuration of the whole may be easily traced.

The pavement consists of three compartments: those at each extremity are regularly divided into fifteen octagons, eight small squares, and sixteen small triangles. Five of these octagons in each compartment, represented human figures in various attitudes, but chiefly Bacchanalian men and woman: the remaining octagons were composed of three different patterns. The vacant parts between the octagons are filled with the small squares; and towards the outward border, with the small triangles. The middle compartment is divided into oblong pannels; in the largest of which is an octagon bath of white marble, of about six feet in diameter, and a foot and a half deep: the sides of the bath are ornamented with dolphins. Of these three compartments, one is almost perfect; the others are very much defaced. Each of the pannels is encircled with several borders prettily diversified; and a general border encloses the whole.

Schmidt, in his *Recueil d'Antiquités de la Suisse*, ingeniously conjectures, from a glory which surrounds a head of Bacchus in this mosaïc, that it was wrought during some part of the intervening age

age between Vespasian and Marcus Aurelius; because that mark of divinity is not usual upon any monuments of Roman antiquity prior to that period. He adds, that the same kind of *glory* is observed upon the head of Trajan in an antient painting at Rome; upon that of Antoninus Pius on a medal; and on the arch of Constantine*. He strengthens this conjecture, by further remarking, that the head-dress of a Bacchanalian woman represented in this mosaic, resembles the head-dress on the medals of the empresses Plotina and Sabina †.

From thence we were conducted to the ruins of an antient amphitheatre, within the walls of the bailif's garden. The general form and size of this building are tolerably perfect, as also parts of the brick walls which enclosed it. The diameter of the arena was, as well as we could judge by pacing it, about eighty yards; which

* The arch of Constantine at Rome being partly formed from the Forum of Trajan, the architect improperly transferred the figures. This circumstance accounts for the *glory* observed round the head of Trajan, on the arch of Constantine, which has been supposed to have represented the head of Constantine.

† The curious reader will find in the *Recueil*, cited in the text, a very accurate description and engraving of this mosaic.

must necessarily have been an uncertain estimate: as a former bailif brought in a considerable quantity of earth, in order to plant fruit-trees; conceiving, I suppose, that good fruit was of more value, than to be able to determine the precise extent of an antient amphitheatre. Under a tower, partly built of Roman materials, is a cell in which the animals were probably let loose upon the arena. On the outside are still to be seen the remains of five dens: and the walls are adorned with several pieces of rude sculpture considerably defaced.

Not far from these ruins stands a large column of white marble, about fifty feet in height, composed of large masses, nicely joined together without cement; and near it lies a considerable fragment of defaced sculpture, which seems to have once formed part of the portal belonging to a magnificent temple. At a small distance from this column, in the high road, we observed a cornice of white marble, sculptured with urns and griffins. As we walked through the town, we remarked several other masses of cornice, ornamented with sea-horses and urns; and some marble columns of beautiful proportions.

About a mile from Avenches, near the village of Coppet, on the other side of a little stream, which separates the canton of Friburgh from that

of Berne, are the remains of a small aqueduct. They were discovered about fifteen years ago, by the accidental falling of a sand-hill which covered the aqueduct. The outside is formed of stones and mortar, and the inside of red Roman cement; the vault of the arch may be about two feet and a half high, and one and a half broad. This aqueduct has been traced to the east-side of the town, and also to near the marble column before mentioned. We were also informed that it extends to the tower of Gausa, between Vevay and Lausanne; and that, between Villarsel and Marnau, about four leagues from Coppet, an arch of nearly the same dimensions is excavated in the solid rock. But whether these several parts actually communicated with each other, or indeed whether they really exist, are facts which, (having only viewed those remains that are visible near this town) I must be contented to rest on the credit of my informers.

P O S T S C R I P T.

WHEN I visited the ruins of Avenches in October 1786, I had much satisfaction in finding, that the bailif, Mr. Tcharner, paid great attention to these remains, and particularly to the mosaic.

mosaic. I could not avoid remarking to the bailif, who politely favoured us with his company; that every lover of antiquity must regret, his predecessors had not shewn the same taste; as the ruins of Avenches would have been a greater object of curiosity. Several excavations had been lately made, at first by Lord Northampton, who has a house in the neighbourhood, and continued at the expence of Berne. A coarse mosaic pavement, a few fragments of walls rudely painted, and some trifling remains of antient baths, are the only vestiges of antiquity hitherto discovered.

I am, &c.

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LETTER

L E T T E R 52.

Town and Canton of Friburgh—Population—Government—Secret Chamber.

FRIBURGH was built in 1179, by Berchtold the Fourth, duke of Zæringen, who endowed it with considerable privileges. Upon the extinction of the male line of the house of Zæringen, in 1218 *, Ulric of Kyburgh obtained the sovereignty, in right of his wife Anne, sister of the last duke Berchtold the Fifth. It came by

* The house of Zæringen was descended from the ancient counts of Alsace, by Berchtold count of Brisgau. His grandson, Berchtold the Second, built the castle of Zæringen, situated near a village of the same name, not far from the present town of Friburgh, capital of the Brisgau. Upon the demise of Berchtold the Fifth, the last duke, without male issue, his territories were divided between his collateral heirs, the dukes of Teck, and his two sisters Agnes and Anne. Agnes married Egeno, count of Urach; by which marriage he obtained possession of Friburgh in the Brisgau: his posterity were called counts of Friburgh. Anne married Ulric, count of Kyburgh: their daughter Hedwige, was wife of Albert count of Habsburgh, and mother of the emperor Rodolph the First.

marriage

marriage into the possession of Eberhard count of Habsburgh-Lauffenburgh; who sold it to his cousin Rhodolph of Habsburgh, afterwards emperor. During this period a continual rivalship subsisting between Berne and Friburgh, they were frequently engaged in mutual hostilities: at length all differences were composed; and the two cities, in 1403, entered into a perpetual alliance.

Friburgh continued under the dominion of the house of Austria, and was concerned in all the quarrels in which that family was engaged with the Swiss republics, until the middle of the fifteenth century; when, by a very singular revolution, it renounced all allegiance to the archduke Albert, and put itself under the protection of the duke of Savoy. From this æra it occasionally assisted the cantons against the house of Austria; and in the war between the Swiss and Charles the Bold, its troops had a share in the victories of Granson and Morat. Soon after the battle of Morat, the house of Savoy, at the intercession of Berne, renouncing all right and title to the town of Friburgh, it became a free and independant republic; and, in 1481, was admitted, together with Soleure, a member of the Helvetic confederacy.

The situation of the town, though not one of the most beautiful, is certainly one of the most picturesque and wild in Switzerland. It stands partly in a small plain, partly on bold acclivities, on a ridge of rugged rocks, half encircled by the river Sane; and is so entirely concealed by the circumjacent hills, that the traveller scarcely catches the smallest glimpse, until he bursts upon a view of the whole town from the overhanging eminence.

The fortifications, which consist of high stone walls and towers, enclose a circumference of about four miles; within which space the eye comprehends a singular mixture of houses, rocks, thickets, and meadows, varying instantly from wild to agreeable, from the bustle of a town to the solitude of the deepest retirement. The Sane winds in such a serpentine manner as to form in its course, within the space of two miles, five obtuse angles, between which the intervening parts of the current are parallel to each other.

On all sides the descent to the town is extremely steep: in one place the streets even pass over the roofs of the houses. Many of the edifices are raised in regular gradation like the seats of an amphitheatre: many overhang the edge of a precipice in such a manner, that on looking down, a weak head would be apt to turn giddy;
and

and an unfortunate lover, repulsed in his suit, might instantly put an end to his pains, by taking a leap from the parlour window, without the trouble of a journey to Leucate, or to the rocks of Meillerie.

But the most extraordinary point of view is from the Pont-neuf. To the north-west, part of the town stands boldly on the sides and the piked back of an abrupt ridge; and from east to west a semicircle of high perpendicular rocks is seen, whose base is washed and undermined by the winding Sane, and whose tops and sides are thinly scattered with shrubs and underwood. On the highest point of the rocks, and on the very edge of the precipice, appears, half-hanging in the air, the gate of the town called Bourguillon: a stranger standing on the bridge would compare it to Laputa, or the Flying Island in Gulliver's Travels; and would not conceive it to be accessible but by means of a cord and pulleys. In the midst of the river I observed a large fragment of stone, which a few years ago fell from the rocky heights, was carried under one of the arches, and in conjunction with other fragments stopping the current, raised it more than ten feet above its usual level, threatening the lower parts of the town with a sudden inundation.

A traveller fond of wild and romantic scenery

will not fail to visit the Moulin de la Motte, and the valley of Goteron. The Moulin de la Motte is a miller's dwelling, hollowed in the midst of an impending rock; near it issues a small torrent, which turning the mill, falls within a few paces into the Sane. This singular dwelling seems so far removed from "*the busy hum of men*," as to be rather situated in a remote solitude, than within the walls of a fortified town. Near it there is an ascent of four hundred steps to the Place des Fontaines, in the upper part of the town.

The valley of Goteron, which lies on the north-west of the town near the bridge leading to Berne, takes its name from the Goteron, a small rivulet that runs through it, and turns several mills. This valley, extremely narrow and above two miles in length, is bounded on each side by high and overhanging rocks of sand-stone. M. Vernet, the celebrated landscape painter, is said to have studied these rocks with great attention; and frequently to have declared, that, excepting those of Tivoli, he never saw any rocks whose varying tints had a more pleasing and harmonious effect. The valley contains several mills; an iron foundery, where the ore brought from Franche Comté is forged; and a manufacture of printed linen and cotton,
lately

lately established by some merchants of Neuchatel, under the protection and encouragement of government.

The houses of Friburgh, constructed with a grey sand-stone drawn from a neighbouring quarry, are neat and well-built; but the whole town has a dull and inanimate appearance.

Among the few objects worthy of particular notice in the town, are, the cathedral, an elegant Gothic edifice, erected in the latter end of the 14th century, and remarkable for the height and solidity of the tower; the town-house, an ancient building, which formerly composed part of the palace belonging to the dukes of Zæringen; and also a lime-tree, in the middle of the principal square. Tradition reports that this tree was instantly planted by one of the soldiers, the 22d of June 1477, on his return from the battle of Morat: an emblem of Swiss liberty, which took deep root on the memorable defeat of Charles the Bold; and thus remaining firm against the conflicts of time, has continued to spread and flourish, to the admiration and example of future ages.

The society of Friburgh is extremely agreeable; the gentry are frank and hospitable, and blend French politeness with great simplicity of manners. Dinner is usually served at twelve; and

and supper seldom later than eight. I never experienced a more cordial reception in any town of Switzerland.

The bishop of Laufanne, called here the bishop of Friburgh, resides in this city. He is appointed by the pope, usually at the recommendation of the French court; and his revenues, including a small pension from France, and from the abbey of Hauterive, of which he was abbot, amount to about £.400 *per ann.* His diocese extends over the whole canton, and part of that of Soleure. In all his acts and deeds he signs himself Bishop and Count of Laufanne, and Prince of the German empire.

The present bishop, Bernhard of Lenzburgh, is a man of letters, and an honour to his profession: he is employed in preparing for the public a biography of the illustrious and learned men born in the canton of Friburgh, who have distinguished themselves, either in the civil, military, or literary line.

This canton is entirely catholic. Its population in 1785 may be estimated from the following table.

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The town contained	—	—	5,011
The environs	—	—	15,500
The remainder of the canton	—	—	33,078
Absentees	—	—	4,000

Number of inhabitants — 57,589

The sovereign power resides in the Great Council of Two Hundred; comprizing the two Advoyers, the Chancellor, the Grand Sautier, the Senate, or Little Council of Twenty-four, the Sixty, from which body are chosen the bannerets and principal magistrates, and the remaining hundred and twelve members, who are simply denominated Burghers.

The only persons capable of being elected members of this sovereign council, and of course enjoying any share in the government, are the *secret* burghers, or a certain number of families divided into four *bannieres*, or tribes of the town: they are called *secret* burghers, in order to distinguish them from the other citizens, partly inhabiting the town, and partly the twenty-four parishes in the environs. The latter enjoy the right of appointing the advoyers, from certain candidates proposed by the sixty, and of annually confirming the said magistrates. Hence many authors

authors have called this government aristo-democratical, but erroneously: for, as the power of the people is confined to the act of choosing and confirming the two advoyers; and as the supreme authority absolutely resides in the council of two hundred, necessarily supplied by a limited number of patrician families, the government is, in the strictest sense, a mere aristocracy.

Instead of troubling you with an uninteresting detail of those points in which the government of Friburgh resembles that of the other aristocratical cantons, I shall confine myself to those peculiar circumstances by which it is discriminated from them. This difference may be principally said to consist in the three following articles:

1. The *blind ballot*, or mode by which several important offices are supplied, and particularly by which the members of the senate and the sixty are chosen. This mode of election was instituted in order to prevent venality; and is too singular not to be distinctly explained. The names of the candidates are placed privately in a box, containing as many partitions as there are persons who solicit the charge. Into each of these partitions the electors throw in their suffrages as chance directs, without knowing to whom they may happen to give their votes; and the candidate

didate who has the most of these casual ballots is elected.

2. The clause which disables certain noble families from bearing the office of banneret, or from being chosen members of the *secret chamber*. These families are sixteen in number: some were acknowledged noble, even as early as the foundation of the republic; others successively obtained titles of counts and barons from the foreign princes to whom they were attached, and in whose armies they had served.

3. But the most remarkable circumstance which discriminates the constitution of Friburgh from that of the other aristocratical cantons, is a committee distinguished by the name of the *Secret Chamber*, which, though not any public or responsible part of administration, is yet the concealed spring that puts the wheels of government in motion. As the prerogatives and operation of this *secret chamber* are in general but little known, and still less understood; I flatter myself that it will not be uninteresting to lay before you a concise account of its origin and constitution.

The *secret chamber*, forming a part of the council of sixty, is composed of the four bannerets, who are reciprocally chosen by the council of two hundred from the four tribes; and of
twenty-

twenty-four members, who are appointed by a majority of their own body: the former remain in office four years; the latter continue for life.

The *secret chamber* assembles ordinarily four times in the year, or oftener if occasion requires: and is convoked by a banneret. The two principal meetings of this body are between the Sunday before St. John's day and the twenty-fourth of June; and usually on the anniversary of the battle of Morat, for the purpose of appointing the vacant places in the council of two hundred; and on Tuesday in Whitsun-week, when they supply the vacancies in their own body.

Its origin is thus traced in the records of the republic. From 1347 to 1387, the three bannerets nominated twenty persons from each of the three tribes into which it was then divided; and these sixty assembled on the Sunday before St. John's day, to establish the Little Council and elect the treasurer; from hence is derived the origin of the sixty, and of the assembly which meets on the Sunday now called *Secret Sunday*. It consists of the whole council of two hundred, excepting the advoyers and senate, and is presided by the chancellor, the four bannerets, and the members of the *secret chamber*, who take the places of the senators. This assembly reviews,
confirms,

confirms, or censures, if necessary, the senators, the bannerets, and the sixty; the members of each tribe retire, while their conduct is examined and reviewed by the remainder. The same assembly fills up also the vacant places in the senate, and in the sixty, by blind ballot.

In 1387, the nomination of the sixty was transferred from the bannerets to the assembly which met on the *Secret Sunday*: and that assembly was also empowered to appoint the Little Council, the treasurer, the sixty, and the remaining members of the two hundred. By a charter of the same year, four coadjutors, drawn from the sixty, are given to each banneret: and it appears that these coadjutors were chosen, in the same manner as the bannerets, separately by each tribe: and this may probably be considered as the origin of the *secret chamber*. A charter of the year 1392, confirms the *Secret Sunday* in the right of nominating the sixty, and confers on the bannerets that of choosing the *prud-hommes*, who accompanied them when they convoked the people on St. John's day; and it is probable that the bannerets also appointed their coadjutors. This nomination took place, as at present, on the Tuesday in Whitsun-week. The town being at that period only divided into three tribes,

tribes, the coadjutors were limited to twelve; and when a fourth tribe was added, their number was augmented to sixteen.

A charter dated 1404 confirms, in many instances, the abovementioned arrangements; but does not grant to the *Secret Sunday* the nomination of the two hundred: a right at that time enjoyed by the bannerets, who shared it with their coadjutors, or the *secrets*; and thus is probably derived the power of appointing the members of the two hundred, since constantly exercised by the bannerets and *secrets*.

The same charter orders the bannerets to assemble on Whit-Tuesday, in conjunction with the sixty of the preceding year, for the purpose of choosing four members of the sixty from each tribe, who should accompany the bannerets when they convoked the assembly of burghers and inhabitants on St. John's day; and two additional members for convening the assembly of *Secret Sunday*. Here then are six persons from each tribe employed in these convocations, or in all twenty-four persons, the number of members who now form the *secret chamber*. The same charter also enjoins the bannerets and *secrets* to collect the votes in all elections and deliberations: an office which they continue to exercise to this day.

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As early as the beginning of the 15th century, the bannerets and *secrets* assembled at Christmas and Easter, for the purpose of preparing and digesting such motions as were to be laid before the Council of two hundred, which adopted, modified, or rejected them.

As the bannerets probably continued to employ the same coadjutors in convoking the assemblies on St. John's day, and on *Secret Sunday*, the *secret chamber*, composed of these twenty-four coadjutors, at length became a permanent body; and enjoys the following prerogatives.

1. It convokes, in conjunction with the bannerets, the people on St. John's day, and the assembly which meets on *Secret Sunday*. 2. It prepares and draws up all the laws and ordinances; enjoys the sole power of proposing in the Great Council; and, by means of the bannerets, of putting a negative on any motion, by affirming it to be contrary to the constitution, without the necessity of proving that it is so. 3. It collects the votes in the election or confirmation of the advoyer, at the meeting of the people on St. John's day, and in the deliberations of the Great Council. 4. It fills up all the vacancies in that Council; 5. Suspends, deposes, confirms, and censures its members; 6. Confirms, or suspends and deposes its own members; makes regula-

tions for the interior administration of its own body; appoints the manner of electing its own members, and filling up the vacancies in the Great Council. 7. Fixes on the time for those elections, and the sum of money which each member is permitted to receive from those who are elected. 8. It can exclude all candidates from being chosen members of the senate, of the sixty, from the office of bailiffs, and other important charges; either by refusal to present, or by rejecting them as incapable.

All these prerogatives, founded on authentic documents, or immemorial usage, were confirmed by the Council of two hundred, in 1606, 1623, and particularly in 1716.

All affairs of government, and all debates in the national assemblies, are carried on in the German language; and as the French tongue is spoken in the greatest part of the canton, and particularly by the gentry, there are many members of the Great Council, who do not understand the debates.

Such was the general form of government when I first visited Friburgh in 1776; since that period it has undergone some very important alterations, the substance of which I shall communicate to you in the following letter.

L E T T E R

LETTER 53.

Origin and Suppression of the late Troubles in the Canton of Friburgh—Changes in the Form of Government.

THE exclusive right of sharing in the administration of affairs, enjoyed by a certain number of families, in the aristocratical cantons, hath, in conjunction with other concurrent circumstances, occasioned revolts in those of Zurich, Berne, and Lucerne, which were quelled by the intervention of the other Helvetic powers, and prevented from again breaking out, by judicious regulations. Friburgh having exhibited a recent example of the same kind; I have endeavoured to trace the origin and progress of those intestine commotions, which have been followed by a considerable alteration in the form of government. Accordingly, I now lay before you the result of my inquiries, impartially drawn from repeated conversations with persons of both parties; from an attentive perusal of several publications written during the course of the troubles;

and from some curious manuscripts, which it was my good fortune to obtain.

In the latter end of April 1781, an insurrection suddenly broke out in the bailliage of Gruyeres, a district in the southern part of the canton; the inhabitants whereof are extremely jealous of their liberties, and zealously attached to all the customs transmitted from their ancestors. Irritated by a few impolitic acts of government, by the petty vexations of the bailiffs; by the secularization of Val Sainte, a convent of Chartreux; by the abolition of several fasts and festivals; and excited by the artifices of Chenaux and Castellaz, two designing leaders; they rose in open rebellion.

Peter Nicholas Chenaux, the chief of the sedition, was a native of la Tour de Treme, in the bailliage of Gruyeres. This man was greatly embarrassed in his circumstances, and highly exasperated against government, having been arrested and imprisoned in 1771, for his disobedient and turbulent conduct. He was in the thirty-eighth year of his age, of a good figure and expressive countenance; and, being a man of rude but popular eloquence, and of an overbearing spirit, had obtained a considerable influence over the artless inhabitants. His abettor, John Nicholas Andrew Castellaz, was a burgher of Fri-
burgh

burgh and advocate of Gruyeres : versed in all the chicanery of the law, conversant in the history and antient records of his country, and well acquainted with the privileges of the people, he was the first to expose the slightest oppressions of the bailif, and to remark wherever government seemed to infringe their immunities, or issued edicts contrary to long-established usages. Having a loud voice, and vehement elocution, he was formed for popular assemblies. He was the person by whom Chenaux was principally directed in all difficult emergencies ; he drew up the principal remonstrances which, exaggerating every defect in the constitution, tended to render government odious, and to spread discontents among the people.

These two leaders having, in conjunction with other accomplices, availed themselves of the public dissatisfaction, and engaged a considerable number of adherents ; held, in the month of April 1781, regular meetings at Bulle. On the 24th, in particular, they insinuated before a large assembly, that government had formed a design of imposing additional taxes of a grievous nature, particularly on horned cattle and horses ; and even of with-holding the annual present of salt, which they shared with the burghers of Friburgh. They represented, that the seculariza-

tion of Val Sainte, and the abolition of certain festivals, implied a settled determination to overturn the religion of their ancestors: that the governing party had many enemies; that the despotism of the secret chamber was held in universal abhorrence; that the nobles were discontented, on account of their exclusion from the principal charges of the commonwealth; that the burghers and inhabitants of the twenty-four parishes were jealous of the exorbitant rights possessed by the secret burghers, to whom was exclusively confined the entrance into the great council, and of course into the administration of affairs, and the lucrative offices of government. They added, that the time was now arrived when they might venture, with impunity, to petition for a redress of grievances; a strong party in the capital was ready, on the first moment of their appearance, to join them; and multitudes would repair from all quarters to the standard of liberty.

Having, by these and similar insinuations, increased the number of their adherents, it was finally concluded, that, on the 3d of May, they should secretly repair to the capital, and, assembling in the market-place, should force the arsenal; that having provided themselves with arms, they should secure the garrison, and constrain the

Great Council to redress their grievances, and make those changes in the constitution, which could alone secure to the people a mild and just administration.

It is sufficiently remarkable, that, notwithstanding the general ferment which prevailed among the people in the bailliage of Gruyeres, and the number of persons concerned in this conspiracy; government received no notice of it, before the 29th or 30th of April. On the first certain news of the intended insurrection, the council of war, who immediately assembled on the occasion, dispatched some troops to arrest Chenaux: but he, having received information from one of his accomplices who happened to be at that time in the capital, escaped to la Tour de Treme; and, being joined by the most desperate of his adherents, determined to take arms without delay. Having, by means of his emissaries, excited the spirit of rebellion among the people, who were informed that Chenaux had narrowly escaped an arrest for his patriotic attempts to secure their immunities; he ventured to repair to Gruyeres, where Castellaz had already collected a considerable party. This advocate, having assembled a large body during the night, expatiated, with much force and eloquence, on the several grievances, using various arguments

in favour of an immediate revolt, similar to those which were urged on the 24th of April. He accordingly inflamed the populace to such a degree, that they flew to arms at five in the morning, and imprisoning the bailif, erected the standard of rebellion. The alarm being now given, Chenaux advanced to Posieux, which was fixed upon for the place of general rendezvous; from whence he addressed a letter to the magistrates of Friburgh, disclaiming all design of having recourse to violence, and requiring only, that the petitions and remonstrances of the people should be taken into consideration.

On the next morning he conducted about sixty of his partizans to a height overlooking Friburgh, with an intention of surprising the city; but finding the gates shut, the fortifications guarded, and not being joined, as he expected, by the inhabitants of the twenty-four parishes, he retired first to Posieux, and afterwards to Avry, where he expected a reinforcement, which Castellaz and his emissaries were collecting in various parts of the canton.

During these seditious proceedings, the magistrates of Friburgh were active in making preparations for the security of the town. The council of war sat during the whole night; a night of extreme terror and anxiety to many of
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the inhabitants. The account of the bailif's arrest, of Chenaux's escape, and that he was stationed at Posieux, within two leagues of the capital, with a corps of rebels whose number rumour exaggerated, was no sooner divulged, than a general panic and confusion prevailed. The garrison scarcely consisted of more than fifty soldiers, and those chiefly invalids; the fortifications were weak and extensive; not more than two hundred burghers could be mustered to defend the ramparts; and the insurgents were supposed to possess a strong party even within the walls. If in this moment of disorder, aggravated by the darkness of the night, Chenaux could have attacked the town with a sufficient force, he might have carried it by assault. But the first emotions of surprise and terror had no sooner subsided, than the besieged assumed a spirit and vigour adequate to the alarming situation of affairs. They all ran to arms; the nobles, burghers, and even strangers crowded to the ramparts, and prepared for a vigorous defence. Their confidence was also raised by the arrival of some militia from Morat, who entered the gates at nine in the morning, and by the expectation of more effectual succours from the canton of Berne.

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On the preceding evening a messenger had been dispatched to Berne, requesting immediate assistance. He arrived in that city soon after midnight: the advoyer d'Erlach, in the 85th year of his age, instantly summoned the Sovereign Council. "Gentlemen," exclaimed the venerable magistrate, "on other occasions you have a year to deliberate; you must now instantly act: Friburgh is besieged by an army of rebels; let those who approve sending troops to her relief, hold up their hands." The members unanimously assenting, the assembly broke up; and twelve hundred troops were commanded to march without a moment's delay. Before the close of the evening Major Rihimer entered Friburgh at the head of two hundred soldiers, who passed unmolested through flying parties of the insurgents; at midnight a hundred and fifty dragoons arrived, and on the next morning eight hundred infantry completed the reinforcement.

The arrival of these troops inspired the magistrates of Friburgh with perfect confidence and security, and saved the town from the most imminent danger. Nevertheless the emissaries of Chenaux and Castellaz, ranging about the country, sounded the church bells in the various towns and parishes, exclaiming that their religion
and

and liberties were threatened with immediate annihilation. The rebel forces were continually augmenting; they began to be joined by many inhabitants in the environs of the town; and the least success would have increased their number. Chenaux had several emissaries within the city, and before mid-day appeared before Friburgh at the head of above two thousand men; eight hundred of whom were provided with muskets, the remainder with only clubs, or the first weapon which chance presented. Having occupied the heights, he found his followers wavering and irresolute, and struck with a general panic on receiving the news, that a large body of troops from Berne had reinforced the garrison. He posted his followers however in an advantageous situation, waiting with considerable anxiety till his forces should be increased, and an opportunity should present itself of commencing hostilities, or of obtaining a general amnesty for himself and his adherents.

In this situation of affairs, Major Rihimer led a detachment of a hundred and eighty dragoons from one of the gates; while Lieutenant Froideville, at the head of seventy foot and twenty dragoons, sallied from another. The Major, driving the besiegers from a height which commanded the town, continued his march with an intent

intent of attacking them in front; and at the distance of about a cannon-shot, reconnoitred eight hundred of the enemy drawn up in order of battle, but without artillery. The insurgents no sooner observed the cannon planted against them, and perceived that the commander was an officer of Berne, than they dispatched repeated messengers to assure him that they had no hostile intentions; that they were only collected to petition for a redress of grievances; and entreated him to spare the effusion of blood. Having received an answer, that he would undertake to intercede in their behalf, if they would instantly lay down their arms, and deliver up Chenaux; they agreed to the first point, but refused the second. The major continued to enforce his demand, and gained time, until lieutenant Froideville appeared unexpectedly in their rear. The two commanders repeating their promises, that their just remonstrances should not be neglected, the whole troop surrendered themselves prisoners. Four of the principal ringleaders being secured, the remainder, having delivered in their names and places of abode, were permitted to retire without molestation.

Chenaux, either finding it impossible to excite his followers to sustain the attack, or being deficient in personal courage, was among the first who

who betook himself to flight. Wandering from village to village, he was, about midnight, observed near Posieux by Henry Rossier, one of his principal accomplices. Rossier, willing to save his own life by betraying his leader, seized him by the collar, reproached him for having seduced the people into rebellion, and for his cowardice in forsaking them; and then, with the assistance of Chavaillat and Python, two other insurgents, took from him a double-barreled pistol, and was conducting him to Friburgh. Chenaux, however, suddenly disengaging himself, drew out a knife, and, wounding Rossier in several places, endeavoured to escape towards Posieux. But Chavaillat pursuing him, and Rossier snatching a musket from one of his followers, soon overtook him, and summoned him to surrender under pain of instant death. Chenaux, finding no hopes of escaping, and deriving courage from despair, attacked Rossier with such inconsiderate fury, that he received the assailant's bayonet in his breast, and expired on the spot.

The death of the leader, the voluntary surrender of his principal associates, and the flight of Castellaz, put an end to this ill-concerted enterprise. Six hundred insurgents, the only remains of the rebels, were on the next morning observed hovering about the capital; but learning

of the fate of their leader, and the surrendering the other troops, and being attacked by a corps of grenadiers, they dispersed without resistance.

But although the insurrection was thus suppressed, and all parties had concurred in chastising rebellion; yet the spirit of discontent had spread itself with too great violence and rapidity among all ranks of men, not to convince the rulers of the state, that the seeds of the revolt lay deeper than appearances seemed to suggest. For it was obvious, that the petty vexations of bailiffs, the abolition of unnecessary fasts and festivals, and the seeming violation of a few trifling immunities, however exaggerated by the artifices of the most designing leaders, could never have been sufficiently powerful to excite the people of Gruyeres to the desperate extremity of taking arms against their lawful sovereigns; if government had not been extremely unpopular; if several grievances of an oppressive nature had not required to be redressed; several odious restrictions to be removed; and several defects in the constitution to be remedied. Influenced by these considerations, government, in a manifesto issued on the 11th of May, after granting a general amnesty to all the insurgents, excepting a few of the ringleaders, found it necessary to invite the
subjects

subjects of all ranks and denominations to present remonstrances, to make representations, and to petition against grievances. About the same time the three cantons of Berne, Lucerne, and Soleure dispatched deputies to Friburgh, offering their mediation towards composing the dissensions of the republic.

In consequence of this manifesto, many petitions and remonstrances were presented to the great council, either claiming the renewal of obsolete rights, the removal of certain restrictions, or the abolition of various taxes; demanding redress of grievances, and an amendment of the constitution; or complaining of an infringement of popular franchises. As it would be needless to mention all the complaints and plans of amendment which were dictated by the spirit of party and the frenzy of innovation, I shall confine myself to three principal points of dispute, which occasioned the most violent altercations; and which would never have been compromised, if the three mediating cantons had not powerfully and effectually interfered: 1. The disqualification of the nobility from the office of bannerets and *secrets*; 2. The exorbitant prerogatives and influence of the *secret chamber*; and 3. The exclusive privileges of the *secret burghers*.

1. With

1. With respect to the first point in agitation, it may be remarked, that the exclusion of the noble families from the charge of bannerets and of *secrets* appeared sufficiently reasonable, as long as the government was democratical, and the bannerets were, according to the antient charters, chosen from the people; and of course when neither they, nor their coadjutors, the *secrets*, could be taken from the nobility. But when the government was changed from a democracy to an aristocracy, and the municipal administration no longer subsisted; and particularly when the troubles excited by the bannerets, in 1553, obliged the Council of two hundred to transfer from the people to themselves the right of appointing those magistrates; the disqualification of the nobility, which was founded in democratical jealousy, ought to have no longer subsisted. Their remonstrances were therefore just, and would have been still more reasonable, if the troubles of the republic had not rendered them dangerous.

2. As to the second point in question: the extensive power and extraordinary influence of the *secret chamber*, could not fail to create jealousies and discontents among all ranks of men. For, on considering the detail of their prerogatives, as laid down in the preceding letter, it
must

must appear, that although the members of that committee enjoyed no positive authority in enacting or annulling laws; yet by being the depositaries of the constitution, and the ultimate framers of all decrees; by having the sole right of proposing, and a negative on all the resolutions of the great council, no motion could pass without their concurrence. It is also no less obvious, that the power of making regulations for the interior administration of their own affairs, mysteriously concealed from the knowledge of the Sovereign Council, might give rise to dangerous abuses; that the members of the chamber eventually enjoyed, by the power of excluding from all charges, that of nomination; that by appointing to the vacancies in their own body it was to be feared, what in effect happened, that an admission into the *secret chamber* would be chiefly confined to a few families; that, as they filled up all the elections in the Council of two hundred, these elections would depend entirely upon a few persons who possessed the greatest credit; and that thus the government would gradually but necessarily tend to a narrower oligarchy.

3. The third point in debate, namely, the exclusive privileges of the *secret burghers*, opened a much larger and more dangerous field of contention.

rention. The demand of the other burghers that, according to the antient form of government, the right of being elected into the Great Council, and consequently a share in the administration of affairs, instead of being exclusively confined to the *secret* burghers, should be also extended to them; seemed to militate against the fundamental laws of the republic, and to involve a total change in the very essence of the constitution.

The remaining part of the year was employed in agitating these points of dispute; which gave rise to many political and historical discussions, and occasioned several curious researches into the origin of the *secret chamber*, and the rise of the distinction between the *secret* and other burghers.

For the purpose of ascertaining these questions, the popular party demanded access to the archives; but met with delays and refusals on the part of government; which considered such an inquiry as of dangerous tendency, and calculated to introduce factious innovations in the state.

Exasperated by repeated refusals, the populace began to shew signs of discontent, and to assemble in great crouds at the place where Chenaux was put to death: they marched in solemn procession,

sion, bearing crosses and colours, and chaunting hymns and *requiems* in honour of this *martyr* (as they called him) to the religion and liberties of his country. These tumultuous meetings would probably have ended in another insurrection, if the bishop of Lausanne had not forbidden them, under pain of excommunication. Towards the conclusion of the year, the deputies from Berne, Lucerne, and Soleure, arrived at Friburgh, for the purpose of composing the differences subsisting in the capital. These deputies, in order to conciliate the burghers, who were no less violent in favour of the nobles than in extending their own immunities, prevailed upon administration to repeal the disabling clause. With respect, however, to the other subjects of controversy; as they conceived it dangerous to entrust the leaders of a heated populace with the records of government, which might be attended with projects of endless innovation; they proposed, that the Great Council should order a committee to draw up a declaration setting forth the privileges and franchises of the burghers; and that for the future this declaration should be considered as a fundamental code.

But although these essential points were obtained, yet so many subjects of altercation still remained, that for some time all further plans

towards finally composing the differences were fruitless. The deputies repaired to Morat, where they were employed, from the 25th of April 1782 to the 25th of July, in hearing appeals, revising and considering the arguments on both sides, and consulting on the best methods to conciliate the two parties.

So greatly however were the burghers dissatisfied with the chiefs of the aristocracy, that they formed a resolution to refuse taking the annual oath of allegiance to the Great Council; nor were they without great difficulty prevailed upon, by the three deputies in person (who repaired to Friburgh for that purpose) to perform the usual homage. Displeased, nevertheless, with the deputies themselves, and considering them as too partial to administration, they delivered a memorial; in which, after representing their grievances, they threatened to appeal to the general diet of the thirteen cantons assembled at Frauenfeld.

A measure of so alarming a nature, tended to produce a very material change in the principles of the Helvetic Union; and was accordingly reprobated in the strongest manner by the members of that confederacy. For it was urged (and with great reason) that by introducing an innovation of such public notoriety, the disputes
between

between the respective governments and their subjects would be liable to become more numerous and dangerous; and that in the end each canton would fall under the guardianship of the remainder. On the other hand, what rendered the present crisis of affairs still more alarming was, that the court of France, consulted by several leading members in administration, had offered her good offices towards composing the dissensions. And although the three cantons had, with consistent dignity, declared against the intervention of any foreign power, and that Friburgh, on accepting such a mediation, should be excluded from the Helvetic Confederacy; yet it was to be apprehended, that on an increase of the troubles, the French would find some pretext to interfere in the affairs of Friburgh, as they were actually engaged in those of Geneva: and "woe upon that republic," said the assertors of Swiss independence, "in whose internal politics foreign powers interpose."

Influenced by these considerations, the three mediating cantons, anxious to bring matters to a speedy conclusion, prevailed upon the ruling party to consent to several alterations in the constitution. At length, after various delays, disputes, and conferences, the deputies published, on the 19th of June, a manifesto, declaring, that

on an impartial and diligent review of the various memorials and manifestos on both sides, the assertions of the burghers were groundless, and their demands unconstitutional; that the present form of government had subsisted above two hundred years; and that the supreme authority resided in the members of the Great Council. To this declaration they added, that the three cantons would defend and protect the existing form of government, and would never permit an appeal relating to the amendment or alteration of the constitution, to any other power than the supreme council of the republic, *that* tribunal being alone competent to such questions.

At the same time they recommended to the government a repeal of the disabling clause, which excluded the nobility from the office of banneret or *secret*; to admit some new families into the *secret* burghership; to hear and redress any remaining grievances; and to correct any defects in the constitution.

This declaration, being accepted by government, was read, on the 28th of July, to the burghers assembled in their respective tribes; but several among them protesting formally against it, the three principal ringleaders of this opposition were banished, their protests disregarded, and tranquillity was restored to the republic.

Soon

Soon after this final pacification, the Great Council passed several acts for the redress of grievances, removed some burdens and usages which had been the object of general complaint, and amended the constitution in the following points.

1. A perfect equality is established between the *secret* burghers; the ancient nobles are no longer disqualified from holding the office of bannerets or *secrets*, but do not enjoy any precedence in consequence of their titles, which in all acts and deeds within the canton of Friburgh are omitted. In return, all the *secret* burghers are, without distinction of persons, esteemed equally noble.

2. Sixteen new families have been admitted into the *secret* burghership, which addition nearly completes the number of a hundred families; and it is further enacted, that on the extinction of any three families, an equal number of families shall be elected without delay.

3. The vacancies in the sixty, instead of being indiscriminately supplied from the members of the two hundred at large, are now filled up according to seniority.

4. But the great and principal alteration in the form of government, respects the new constitu-

tion of the *secret chamber*; which is changed in the following important points.

1. The members of that committee, instead of being nominated by a majority of voices in their own body, are now taken from the sixty, and chosen by *blind ballot*. The candidates are no longer under the necessity of being presented by a member of the *secret chamber*; but, on addressing themselves to their banneret, the latter is obliged to deliver in their names to the *secret chamber*. As each vacancy is supplied from the particular tribe in which it happens, this alteration must necessarily reduce the candidates to three or four: in order, also, to prevent cabal or corruption, if there shall be only one candidate, he is not necessarily elected; but it must be decided by lot, whether he shall be chosen or rejected; and in case there should be a majority of ballots for the negative, he must wait till the subsequent year, before he can have another chance of being appointed. Each member, on his election, shall pay no more than £. 1. 10s. to each banneret and *secret*; and the money shall be delivered to the secretary, and by him be equally distributed. 2. Neither father and son, nor two brothers, nor more than two persons bearing the same name, shall be admitted at the same time into

into the *secret chamber*. 3. The members still retain the right of filling up all the vacancies in the Council of two hundred, with the usual provisions, that the candidates shall be twenty years of age; and that the promotion shall take place every two years. It is further decreed, that, on oath, under pain of deprivation, no more than 1200 crowns * shall be received for the nomination; and that the said sum, instead of being solely appropriated to the person who is to appoint, shall now be delivered to the secretary, to be by him equally distributed among the four bannerets, when either of them shall elect, or among the members of the *secret chamber* belonging to the tribe in which there is a vacancy, when the turn devolves upon either of them †. It is moreover added, that if the person presented by a banneret, or a *secret*, shall be rejected by two-thirds of the chamber, another may be presented; but if the second is rejected, the right of presentation shall be transferred to the banneret, or *secret*, next in rank of the same tribe. It is also stipulated on oath, that all promises of exchanging presentations, or similar engagements, shall not

* Of 25 each each, the whole sum £. 171. 13s. 10d.

† Each banneret to nominate the first vacancy in his own tribe, and then each *secret* by rotation, according to seniority, in his particular tribe.

be valid for the future ; those only excepted, which are now absolutely subsisting, and which concern either a son of the contracting party, or a person whose name is specified. 4. The power of excluding persons from the principal charges of government, is still reserved to them ; but they are exhorted to use it with great precaution and care. 5. The interposition of a negative, exercised by a single banneret, is no longer sufficient to reject a motion in the great council. The opposition, in order to render it valid, must now be founded on a precise law, and unanimously approved by the four bannerets : but if one shall dissent, it is then referred to the Council of two hundred, which shall decide, by a majority of two-thirds, whether the negative shall be confirmed or rejected. 6. The power of proposing, formerly vested only in the *secret chamber*, is now extended to the members of the Little Council and the sixty ; and the mode of deliberating on such propositions and motions, is attended with forms more or less complicated, as the object is more or less important. In all instances the laws are prepared and finally drawn up by the secret chamber. 7. The *secrets* shall take an oath before the bannerets as delegates of the Great Council, to obey all the ordinances of that assembly, and to observe the present articles, without

without retrenching or adding to them. And it is further ordered, that no alterations shall be made in the present constitution of the *secret chamber*, unless approved by three-fourths of their own body, and by two-thirds of the Great Council.

L E T T E R 54.

Cheese of Gruyeres—Hermitage near Friburgh.

THE canton of Friburgh contains a small portion of arable land, but abounds in pastures; and, accordingly, its principal articles of exportation consist in horned cattle, cheese, butter, and hides.

The cheese, well known under the name of Gruyeres, which is exported in such large quantities, is made in a chain of mountains about ten leagues in length and four in breadth, extending from the bailliage of Schwartzzenburgh to the districts of Vevay and Aigle in the canton of

Berne. All the cheeses, though made in the same manner, are not of the same quality; a difference probably arising from the diversity of the soil, the same plants not growing at all heights; and the lower pastures, called *gites*, being not in such high estimation for their goodness as those in the most elevated situations.

The whole district is divided into greater or lesser farms, which the proprietors let out in leases of three or six years, at the annual rate of 16s. to £. 1. 10s. during five months for each cow, according to the nature or elevation of the ground: the lower pastures, though not of the best quality, are the dearest, because being sooner free from the snow, and later covered with it, they afford food to the cattle for a longer space.

Each farmer, having rented a mountain, hires from the different peasants in the canton from forty to sixty cows, from the 15th of May to the 8th of October: he pays at the rate of from £. 1. 6s. to £. 1. 13s. 6d. per head; and each cow upon an average yields from twenty to twenty-four quarts of milk per day, and supplies two hundred pounds * of cheese during the five months. On the eighteenth of October the

* Each pound contains seventeen ounces and a fraction.

farmer restores the cows to the different proprietors. The cattle are then pastured in the meadows which have been twice mowed, until the 10th or 11th of November, when, on account of the snow, they are usually removed to the stables, and fed during winter on hay and after-grass.

As the mountains in the canton of Friburgh afford pasture for at least 15,000 cows, it may be estimated that they annually supply about 30,000 hundred weight of cheese fit for exportation; beside 2,000 or 3,000 on their return from the mountains, exclusive of a thinner sort, which is made in various parts of the canton. The cheeses fit for exportation weigh from forty to sixty pounds each, and are sold from £. 1. 17 s. to £. 2 per hundred weight. Beside the cows which are pastured during summer in the mountains, the canton contains about 12,000 belonging to the several landholders, which supply their families with milk.

The buildings necessary for making the cheeses consist of a *chalet* or cottage, which contains a room with a furnace for the purpose of boiling the milk, a cellar where the milk is preserved, and a stable for sixty or seventy cows; near it is a kind of dairy-room, kept in an equal degree of temperature, where the cheeses are every day turned

turned and salted. The thickness of the vat, in which each cheese is pressed, is about four inches. The casks for exportation contain ten cheeses, excepting those destined for Italy, which hold only three, in order to be conveyed by mules across the Great St. Bernard. The cheeses well packed up bear the transport into the most distant countries; they ought to be kept in a damp place, and frequently washed with white wine, for the purpose of preserving them from insects. When the cows return from the mountains, a species of cream cheese is made in autumn, and even in winter; it is much esteemed, and is dearer than that of Gruyeres.

The greatest part of the salt used on these occasions is drawn from Franche Comte, a small quantity from Lorraine and Bavaria, but its quality is much inferior. The consumption of the whole canton, for all purposes, is at least 20,000 hundred weight, of which 15,000 is drawn from Franche Comté.

A great number of mares, foals, and horned cattle, are annually raised in the canton: the oxen of three or four years old are sold in the canton of Berne, in the country of Neuchatel, and in Franche Comté. Upon an average it may be estimated that the canton of Friburgh
annually

annually supplies pasture for 37,000 cows and oxen.

In our route to Berne, we made a small circuit to the village of Neuneck, in order to see an hermitage, that lies about a league from Friburgh; and which has been highly extolled by travellers on account of its singularity. It is formed in the solid rock; and the chief curiosity consists in its having been the work of two men: as such, it is an astonishing performance, but, in any other respect, is scarcely worth visiting. In the last century a hermit scooped out a hollow in this rock, just sufficient to lie at his full length: but his successor desiring a more commodious mansion, hewed, in the heart of the mountain, a chapel, several apartments, and stair-cases. The length of the whole is above four hundred feet. One room is ninety feet long, and twenty broad; the steeple of the chapel, if it may be so called, is eighty feet high, and the chimney of the kitchen ninety.

The hermit who perforated this dwelling in the rock, was near thirty years engaged in the work. What a waste of time and industry! But such is the folly of sequestered superstition, that, for want of better occupations, it frequently has recourse to laborious trifles. The situation of this hermitage is beautiful: the rock in which it is cut,

cut, hangs over the river Sane, which meandering through two chains of hills covered with wood, fills all the valley beneath. The present hermit is a German; and with him lives an old foldier.

From this hermitage to Neuneck (at which place the canton of Berne commences) the country is rich, and finely wooded; on our right we had a distant but sublime view of the most rugged rocks, the snowy alps rising above them and closing the prospect. The sun was now declining: the various tints of the evening—the purple gleam upon the naked rocks—and the rays of the setting-sun upon the glaciers, which seemed to glow almost into transparency—cast such a beautiful radiance over this magnificent scene, as even the luminous pencil of Apelles himself, who is said to have painted “*quæ pingi non possunt, fulgura & fulgetra* *,” would in vain have attempted to imitate.

I am, &c.

* Vid. Plin. H. N. lib. 35. c. 10.

LETTER 55.

Town and Canton of Berne.

Berne, Sept. 16.

I WAS very much struck, upon my entrance into Berne, with its singular neatness and beauty: I scarcely remember to have seen any town (Bath alone excepted) the first appearance whereof had a more pleasing effect. The principal streets are broad and long, not strait, but gently curved: the houses are mostly uniform, built of a greyish stone upon arcades. Through the middle of the streets runs a lively stream of the clearest water, in a stone channel, while several fountains are not less ornamental to the place than beneficial to the inhabitants. The river Aar almost surrounds the town, winding its course over a rocky bed much below the level of the streets; and for a considerable way forming by its steep and craggy banks a kind of natural rampart. The cathedral, a noble piece of Gothic architecture, stands upon a platform raised at a great expence from the bed of the river, and commands a most extensive view. The ad-

jacent country is richly cultivated, and agreeably diversified with hills, lawns, wood, and water; the river flows rapidly below, and an abrupt chain of rugged and snow-capt alps bounds the distant horizon. Such an assemblage of wild and beautiful objects would in any place present a most striking prospect; but its effect becomes greatly heightened when seen from the midst of a large town.

According to the native historians, Berne was built by Berchtold the Fifth, duke of Zæringen; and was, from its foundation, an imperial city. Upon the death of Berchtold in 1218, the emperor Frederic the Second conferred upon the inhabitants considerable privileges, and compiled also a code of legislation, which forms the basis of their present civil laws. The liberty which this city enjoyed, attracted many inhabitants from the adjacent country, who found a sure asylum from the oppression of the nobles. Although Berne from its first foundation was engaged in perpetual wars with its neighbours, and for some time with the House of Austria; yet it continued to aggrandise itself by degrees, and considerably to enlarge its territory. In the year 1353, Berne acceded to the Helvetic confederacy; and possessed such great power, even at that early period, as to obtain the second rank among the
Swiss

Swiss cantons. Since the acquisition of the Pays de Vaud, the domains of this canton form nearly the third part of Switzerland, and about the fourth of the actual population : it contains about 370,000 souls, exclusive of 11,000 in the capital. At the introduction of the reformation in 1528, government acquired a large encrease of revenue by secularising the ecclesiastical possessions. At the same period, the whole canton followed the example of the capital ; and the reformed religion was permanently established. The canton is divided into two great divisions ; the Pays de Vaud and the German district. The Pays de Vaud having been conquered from the house of Savoy, and the German district from the states of the empire ; justice is administered, and the taxes regulated in those two provinces by laws and customs peculiar to each. Each of these divisions has its treasurer and chamber of appeal resident in the capital : the chamber of appeal belonging to the Pays de Vaud, judges in the last resort ; but the inhabitants of the German district may again appeal from theirs to the Sovereign Council.

At Berne the society is extremely agreeable, and foreigners are received with great ease and politeness. The men do not meet in separate societies ; and the women are the life and orna-

ment of their daily assemblies. These assemblies begin about four or five in the afternoon, and continue till about eight, when the parties retire to their respective houses.

Dancing is a very frequent amusement at Berne. There is a public ball every fortnight; and in winter scarcely an evening passes without one. These diversions commence at so early an hour as five in the afternoon, on account of a standing order from government, which prohibits their continuance after eleven. English country dances are commonly introduced, but the *walse* (which is a species of allemande) the favourite dance of the natives, is most common. The parties arrange themselves in distinct couples, and follow each other in a circular direction, the gentleman turning his partner with great velocity. The life and spirit of their dances strike a foreigner with astonishment, and can scarcely be conceived by those who have never seen them. The gaiety of these parties is still more enlivened during the summer months, when the natives resort to a garden near the town, and dance under an open pavilion amid scenes of rural festivity. The foreigner who prefers the constant intercourse of company to a more tranquil society, will chuse the residence of

of Berne rather than that of any other town in Switzerland.

There is but little trade in the capital: some few manufactures indeed (chiefly of linen and silk) have been established; but are carried on by those only, who have no prospect of being admitted into the Sovereign Council. For, those families who enjoy any influence in public affairs, would hold themselves degraded, by engaging in any branch of commerce; and as offices of the state, except bailliages, are in general not very profitable, nor indeed numerous, many of them enter, as their sole resource, into foreign armies. One general advantage, however, is derived from this anti-commercial spirit: the members of government not being interested in laying restrictions on trade, do not, as at Zurich and Basle, confine the exclusive right of establishing manufactures to the burghers of the capital; but wisely extend that permission to all their subjects, without distinction of rank or place. From this circumstance, in conjunction with the mildness and wisdom of government, arises that comfortable state, and even wealth, which so peculiarly distinguishes the peasantry in the whole canton of Berne; and to the natural result of these wise regulations may be reasonably

imputed the attachment to government particularly observable in the German district.

It is worthy of remark, that the peasants, who have acquired opulence either by manufactures or agriculture, seldom quit their situation; they continue in the same habits which they contracted in the earlier period of life, and, however wealthy, never give their daughters in marriage but to persons of their own description.

The public buildings are constructed in a noble simplicity of style, and announce the riches and grandeur of the republic. The arsenal contains arms for sixty thousand men, and a considerable quantity of cannon, which are cast in the town. The granary, an excellent institution, similar to that of Zurich, always contains a large provision of corn; which is supplied in consequence of particular treaties by France and Holland.

The charitable institutions of Berne are numerous, liberal, and well directed. The hospitals are in general large, clean, and airy; and, in the alms-house for the reception of fifty poor citizens, is a curious establishment similar to one which I noticed at Basle. Distressed travellers are treated with a meal and a lodging, if at
2 night,

night, and receive six-pence on their departure. If sick or wounded, they are maintained till their recovery is established.

The house of correction, which, when the benevolent Mr. Howard visited Berne, was in so deplorable a state, is now extremely well regulated, and reflects great honour on Mr. Manuel, member of the Great Council, to whose care and attention this salutary change is chiefly owing. Formerly all delinquents, without distinction of crime, were confined in the same place; but they are now separated; and two houses are established; one called the House of Correction for greater crimes, and the other the House of Labour for smaller misdemeanors. The prisoners are also discriminated by the appellations of *brown* and *blue* from the colour of their clothes, with which they are supplied gratis during the term of their confinement. The brown colour is appropriated to the house of correction, the blue to the house of labour. The men and women are lodged in separate apartments. Both are constantly employed, sometimes in cleaning the streets, and other servile occupations; at other times they are taught to read and write, and are instructed in various trades, which may assist them in gaining a maintenance at the expiration of the time for which

they were sentenced to hard labour. By these means the expence of the establishment is nearly supported; and an honest livelihood assured to those who would otherwise prove useless or pernicious members of society.

There are four tables, at which the respective seats are a mark of distinction appropriated to good behaviour, and a larger or lesser share of provision is distributed to each in proportion to their industry. After having earned their food, the prisoners in the house of labour receive ten per cent. those in the house of correction eight per cent. for their extra work.

Public justice is wisely and impartially administered; and the torture, which had for some time fallen into disuse, is now formally abolished by a public act of government. This humane and just act forms a distinguished æra in the history of Swiss jurisprudence; as the example of so powerful and wise a government cannot fail producing a general influence; and it is to be hoped, will be the prelude to its abolition throughout Switzerland.

The solemnity used in passing capital sentence on a criminal, deserves to be mentioned and imitated. The trial being finished, the prisoner is informed of his condemnation by the *Grand Sautier*, or lieutenant of the police, and attended by

by two clergymen, who prepare him for death. On the day appointed for execution, a large scaffolding, covered with a black canopy, is constructed in the middle of the principal street. The advoyer, with a sceptre in his hand, is seated on an elevated kind of throne between two senators, and attended by the chancellor and the lieutenant of the police, holding an iron stick, called the *rod of blood*, all habited in their official robes. The criminal being brought to the foot of the scaffolding without chains, the chancellor reads aloud the sentence of condemnation, at the conclusion of which the advoyer bids the executioner approach. The latter instantly binds the arms of the culprit, and leads him to the place of execution.

The public library is a small but well-chosen collection, and contains 20,000 volumes, a cabinet of Swiss coins and medals, and many curious manuscripts: of these, Mr. Sinner, a man of great erudition, has published a judicious catalogue. He has not only set forth their titles, and ascertained their age, but has also given a general and succinct account of their respective subjects; and from many has published extracts equally curious and interesting. Among these MSS. are some of the thirteenth century, consisting of several songs and romances of the Troubadours,

Troubadours, written in that and the preceding ages, which merit the attention of those who are conversant in that species of antient poetry.

Learning is neither so universally encouraged, nor so successfully cultivated here as at Zurich; the academical studies are almost solely directed to those branches of knowledge more essentially necessary for entering into the church. The society for the promotion of agriculture, is almost the only establishment that directly tends to the progress of the arts and sciences; and meets with no great countenance from government,

P O S T S C R I P T.

October 1786.

I FEEL a very sensible satisfaction on adding, that this enlightened government no longer merits the reproach of not sufficiently encouraging the arts and sciences. It is now awakened from its former lethargy, and begins to perceive that it is the interest of every wise government to esteem and protect the sciences. The magistrates have lately purchased and appropriated a large mansion for the public library; increased the collection of books; and procured from England an extensive apparatus of experimental philosophy.

Among

Among other undertakings which meet with their encouragement, a new map of the canton is now preparing under their auspices, by the professor of experimental philosophy, a great *desideratum* in the geography of Switzerland, as the alps of the canton are unfaithfully delineated in all the maps which have fallen under my observation. I am also happy to add, that the Reverend Mr. Wyttenbach has lately instituted a literary society for the promotion of physics and natural history in general, and that of Switzerland in particular. In January 1788, this society consisted of ten members resident at Berne, of whom several possess, and others are forming, collections agreeable to the plan of the institution. The members have established regular correspondence in various parts of Europe, and are ready to answer the inquiries of foreign naturalists, who wish to be informed concerning any points which relate to the natural history of this country. An institution founded on such liberal and extensive principles, and having one object principally in view, cannot fail to render the most essential service to science.

I am, &c.

LETTER

L E T T E R 56.

Government of Berne.

WERE I to attempt entering into an exact disquisition concerning the government of Berne; my letter would not only exceed its proper limits, but would hardly be contained within the extent of an ordinary pamphlet. I am persuaded, therefore, you will readily excuse me from putting your patience to so tedious a trial: but you would probably think me very inconsistent indeed, if, after having already descended into less interesting details, I should pass over in silence a government, the wisdom of whose administration is so justly admired. Let me endeavour then to sketch the general outlines of this constitution.

The sovereign power resides in the Great Council of two hundred; which when complete consists of two hundred and ninety-nine members, chosen from the citizens; from whom they are considered as deriving their power, and as
acting

acting by deputation. The authority with which they are invested, is in some respects the most absolute and uncontrouled of any among the aristocratical states of Switzerland. The government of Lucerne is called, indeed, the most aristocratical of all the cantons ; and it may be so, perhaps, with respect to the small number of families, to which the administration of affairs is entrusted : but no war can be declared, no peace concluded, no alliance made, no taxes imposed, without the consent of the burghers in a general assembly. At Friburgh and Soleure the burghers are likewise convened upon particular occasions. Whereas the Great Council of Berne, since 1682, when it was declared the sovereign, is restrained by no constitutional check of this kind ; as a general assembly of the citizens is never convened on any occasion.

The executive powers of government are delegated by this Sovereign Council to the senate, chosen by themselves from their own body : the former assemblies ordinarily three times a week, and extraordinarily upon particular occasions ; the senate every day, Sundays excepted.

The senate, comprising the two advoyers, or chiefs of the republic, is composed of twenty-seven members : and from this select body are drawn the principal magistrates of the commonwealth.

wealth. On a vacancy in the senate, the mode of election is as follows :—Twenty-six balls, three of which are golden, are put into a box, and drawn by the several members : those who draw the three golden balls, nominate three electors out of their body. In the same manner of balloting, seven members are chosen from the Great Council, who also nominate seven electors out of their own body. These ten electors fix upon a certain number of candidates, not exceeding ten, nor less than six ; and those among these candidates, who have the fewest votes in the Sovereign Council, retire, till their number is reduced to four : then four balls, two golden and two silver, are drawn by the four remaining candidates ; the two who draw the former are put in nomination, and he who has the greatest number of suffrages in the Sovereign Council, is chosen. But in order to be eligible, the candidate must have been a member of the Great Council ten years, and must be married, or a widower.

The Great Council is generally filled up every ten years ; as within that period there is usually a deficiency of eighty members to complete the whole number of two hundred and ninety-nine : a new election can only be proposed on a vacancy of eighty ; and cannot be deferred when there is a
deficiency

deficiency of a hundred. The time of election being determined by vote, each advoyer nominates two of the new members; each seizenier, and each member of the senate, one each: two or three other officers of state enjoy the same privilege. A few persons also claim, by virtue of their offices, a right of being elected: and their claim is generally admitted. These several nominations and pretensions, commonly amount, in the whole, to about fifty of the new members: the remaining vacancies are supplied by the suffrages of the senate, and the seizeniers.

The *Seizeniers* are sixteen members of the Great Council, drawn yearly from the abbayes or tribes; two from each of the four great tribes, and one from each of the remaining eight. The candidates are generally * taken from those who have exercised the office of bailifs; and are elected by lot. Every year during three days at Easter,

* I say *generally*, because it is not absolutely fixed, that all the seizeniers must have been bailifs: for if it happens, that in one tribe there are two persons, one of whom has been a bailif, and the other is a member of the Great Council; they draw lots for the charge. And should a member of the Great Council be the only one of his tribe, he becomes seizenier of course, provided he is eligible. In order to be seizenier, the candidate must be married, or a widower, and have neither his father or brother in the senate.

all other employments in the state are suspended, except those of the bannerets and the seizeniers, who, during this suspension, are invested with a power similar to that of the Roman cenfors. In case of ~~mal~~-administration, they may remove any member from the Great Council, or from the Senate: but it is a power which they never exercise; and should they think proper to exert it, the sentence must be confirmed by that council.

The principal magistrates are, two advoyers, the two treasurers, and the four bannerets: they are each of them chosen by a majority of voices in the Sovereign Council, and are yearly confirmed in their respective offices. The advoyers hold their post for life; the treasurers, six years; and the bannerets, four. At Easter the advoyer in office delivers up his authority, in full council, to his colleague. The *reigning* advoyer sits on an elevated seat, under a canopy, and the seal of the republic lies upon the table before him. He never delivers his opinion except it is demanded; he enjoys no vote unless the numbers are equal; and in that case, he has the casting voice. The advoyer out of office, is the first senator in rank, and president of the secret council.

The

The two treasurers, one for the German district, and the other for the Pays de Vaud, form, in conjunction with the four bannerets, an oeconomic chamber, or council of finances: this council examines and passes the accounts of the bailiffs, and receives the revenues of all those who are accountable to government. The four bannerets, together with the advoyer out of office, the senior treasurer, and two members of the senate, compose a committee or secret council; in which all state affairs, that require secrecy, are discussed.

I have only described these eight magistracies, as being the chief offices of the state, and exercised by members of the Senate. But although the general form of this constitution is entirely aristocratical; and the Senate possesses a very considerable influence; yet it does not enjoy that almost exclusive authority, which is observable in many aristocratical governments. For, by several wise and well-observed regulations, the Sovereign Council, although it delegates the most important concerns of government to the Senate; yet assembles, at stated times, and superintends the administration of public affairs.

It may also be remarked, that although the antient houses retain very considerable influence, and are more readily entrusted with the admini-

stration of affairs ; yet that the principal charges of government are not exclusively confined to them ; many new families being always admitted into the Sovereign Council on every election. It must nevertheless be acknowledged, that, as the citizens are continually diminishing, and their vacancies are never supplied ; it would well become so wise a government to receive occasionally new families into the burghership, in order to prevent the ill effects arising from the partial and narrow spirit of too confined an oligarchy. Government is administered throughout its several departments with great precision ; and every ordinance is executed with as much dispatch as in a monarchical state. The administration of affairs is carried on with great wisdom and moderation ; and the rulers are particularly cautious not to encroach upon the privileges of the subject.

The canton of Berne is divided into a certain number of districts, called bailliages ; over which, bailiffs are chosen from the Sovereign Council : and, these posts being the most profitable in the disposal of government, are the great objects of general pursuit. Formerly the bailiffs, taken indifferently from the Senate or Great Council, were nominated by the bannerets ; but as this method rendered the members entirely
dependent

dependent upon those who had the chief credit and influence in the commonwealth; the mode of election was altered in 1712, and they are now chosen by lot. No competitor, however, can be received as a candidate, in opposition to a more antient member of the Great Council: for instance, he who was admitted in 1766, cannot stand against one who was chosen in 1756. None but married men or widowers are capable of being elected into this office; nor can any person occupy more than once the principal bailliages: those of a less valuable kind may be possessed three times.

The several bailifs are representatives of the sovereign power in their respective districts. They enforce the edicts of government; collect the public revenues; act as justices of the peace; and are judges in civil and criminal causes, except where there is any local * jurisdiction. In civil causes, beyond a certain value, an appeal lies to the courts of Berne: in criminal affairs, the process is made out in the bailif's court, undergoes a revision in the senate, and is referred to the criminal chamber, which inflicts punishment

* The lord of the estate of Diesbach enjoys, within his own lands, the same powers, in criminal affairs, as are possessed by the bailifs in their respective districts.

for small misdemeanors. In capital cases, the sentence must be confirmed by the Senate, and by the Sovereign Council, if the delinquent is a citizen of Berne. The bailif delivers his accounts to the œconomical chamber, to which court an appeal lies, in case of exaction, either on the part of the bailif, or of his officers: and with respect to those misdemeanors that are punishable by fine, and of which the bailif is entitled to a share; the proportion of the respective penalties is settled by the legislature with the most scrupulous exactness, and not left to the arbitrary decision of an interested judge.

Although from all these considerations it should seem, that every possible precaution has been taken by government to prevent the extortions of the bailifs, yet instances have not been wanting to prove, that these wise and strict regulations may be eluded: but it is no less certain, that where bailifs have been guilty of oppressions, frequent examples occur of their being impartially and severely punished.

The profits of this office arise from the produce of the demesnes, of the tythes, and certain duties paid to government in the respective bailliages. In some parts of the German division, the bailif is entitled, upon the death of every peasant, to a determinate part of the inheritance:

heritance: although his share is very inconsiderable, yet in some situations it may prove an oppressive tax upon the family. This tax is the only instance that has fallen under my knowledge, where the peasants of this canton are liable to any imposition, which can justly be deemed grievous.

Although there are no standing armies in Switzerland; yet in many of the cantons, and particularly in Berne, the militia is so well regulated, that government could assemble a very considerable body of men at a moment's warning. To this end, every male at the age of sixteen is enrolled in the militia; and about a third of the whole number are formed into particular regiments, composed of fusileers and electionaries; the former consisting of batchelors, and the latter of married men. Every person thus enrolled, is obliged to provide himself, at his own expence, with an uniform, a musket, and a certain quantity of powder and ball: and no peasant is allowed to marry, unless he produces his uniform and arms. Every year a certain number of officers, who are called Land Majors, are deputed by the council of war, throughout the canton, to inspect the arms of the soldiers; to complete the regiments; to exercise the militia;

litia: and upon their return they make their report to that council. Beside this annual review, the regiments are occasionally exercised by veteran soldiers, appointed for that purpose.

Beside the arms in the arsenal of Berne, a certain quantity is also provided, in the arsenal of each bailliage, sufficient for the militia of that district; and likewise a sum of money amounting to three months pay, which is appropriated to the electionaries in case of actual service. The dragoons are chosen from the substantial farmers; as each person is obliged to provide his horse and accoutrements. In time of peace, the advoyer out of office, is president of the council of war, and a member of that council is commander of the militia in the Pays de Vaud; but during war a general in chief is nominated, who commands the forces of the republic.

A certain number of regiments being thus always in readiness, signals are fixed on the highest part of each bailliage, for assembling the militia at a particular place in each district; where they receive orders for marching.

Before I close this letter, I shall just mention an institution called the *Exterior State*, as remarkable

remarkable for its singularity as its utility. It is a model of the Sovereign Council, and is composed of those burghers, who have not attained the age requisite for entering into that Council. It has a Great Council, a Senate, two advoyers, treasurers, bannerets, and feizeniers; all of whom are chosen in the usual manner, and with the accustomed ceremonies. The post of advoyer in this mimic community is solicited with great assiduity, and sometimes obtained at a considerable expence; as the successful candidate is always admitted into the Great Council, without any farther recommendation. This body possesses a certain number of bailliages, which consist of several ruined castles dispersed over the canton: it has also its common treasure, and its debts. In this latter article, however, it by no means resembles the actual government of Berne, which is not only free from debts, but possessed of a very considerable fund in reserve.

This remarkable institution, may be considered as a political seminary for the youth of Berne. It renders them acquainted with the forms of the constitution; and, as the members debate upon all kinds of political subjects, affords them an opportunity of exercising and improving their talents, and by that means of

becoming more capable of serving the public, whenever they may be admitted to a share in the administration of government.

I am, &c.

L E T T E R 57.

Biographical and Literary Anecdotes of Haller.

BERNE has produced few men highly eminent in literature; but has established her glory in being the birth-place of the celebrated Haller.

Albert Haller *, the youngest of five brothers,
was

* The materials for this biographical sketch, are chiefly collected from the following lives of this great man, which, as I was informed, by his eldest son, since deceased, are those to which most credit may be given. 1. *Leben des Herrn von Haller*, by George Zimmerman. Zurich, 1755. The author was the disciple and friend of Haller. 2. *Lebende auf Herrn Albrecht von Haller, von Herrn von Balthe-*

far

was born on the 16th of October 1708. His father, Emanuel Haller, a citizen of Berne, practised the law as an advocate with great success;

far. Basel, 1778. The author was Haller's intimate friend, and was well acquainted with the principal events of his life. He is the same gentleman whom I have mentioned in vol. i. p. 251 of this work. 3. *Lobrede auf Herrn Albert Haller*. Durch, V. B. Tschanner des Grossen Rathes, &c. Berne, 1778. Mr. Tschanner, being a native of Berne, and an intimate acquaintance of Haller, his account deserves implicit credit. He was author of several esteemed works on the topography and history of Switzerland. He died in 1778, a short time after he had pronounced this panegyric on his deceased friend. 4. *Eloge Historique d'Albert de Haller, avec un Catalogue de ses Oeuvres*. Geneve, 1778. Sennebier, the writer of this eulogium, is well known as the learned author of *Bibliothèque de Geneve*, and of *Histoire Literaire de Geneve*. He informs us, that he received several anecdotes from the family of Haller.

Many other panegyrics and lives of Haller have been published in various parts of Europe; but as they were mostly written by those who were not personally acquainted with him, I have not cited them as authorities. His son mentions nineteen lives and panegyrics of his father, that had fallen under his notice in 1784. See Bibl. Schweit. Geschic. vol. ii. N° 882—906. I have been enabled to add several anecdotes which I procured at Berne, and from his eldest son the late bailif of Nyon.

The completest list of Haller's works is to be found in the 6th volume of "*Epistolæ ad Hallerum scriptæ*." Berne, 1775. His subsequent publications may be supplied from Sennebier's catalogue.

and

and in 1713, removed from the capital to Baden, where he was appointed secretary of that bailliage.

Although many accounts are usually related concerning the early genius of distinguished persons, which do not always deserve implicit credit; yet the premature abilities and application of Haller are incontestably proved. When he had scarcely attained his fifth year he was accustomed to write the new words, which he recollected to have heard in the course of the day. His progress in the languages was so rapid, that in his tenth year he could translate from the Greek, and composed for his own private use a Chaldaic grammar, a Greek and Hebrew lexicon. His passion for letters was also so general and ardent, that, about the same period, he abridged from Bayle and Moreri an historical dictionary, comprising above two thousand lives, and distinguished himself by a satire in Latin verse against his preceptor Abraham Baillod, a person of considerable learning, but of a capricious and morose disposition.

Such unwearied application, and such astonishing progress, in a youth of his years, ought to have ensured the approbation and encouragement of his family. On the contrary, his father, who had destined him to the law, reproved his
growing

growing taste for polite literature, was particularly offended at his inclination for poetry, as likely to draw him from the severer occupations, and objected to the variety of his pursuits as too desultory and superficial. He did not consider, that, during childhood, the principal requisite of education is to infuse a taste for application in general; and, that when the base of education is rendered as broad as possible, it may always, like a pyramid, be reduced to a point. But neither his father's repeated exhortations, nor his preceptor's severe admonitions, could oblige the youth to confine his studies to one object, or check his insatiable thirst for general information.

In this manner he was educated until 1721, when, on his father's death, he was removed to the public school at Berne. He was placed in a class far above his age; and usually wrote in Greek the exercise, which he was expected to compose in the Latin tongue.

In 1723, he obtained permission to accompany a young friend to Bienne, in order to be instructed in philosophy by the father of his companion, who was a celebrated physician. But his new preceptor being a bigot to the Cartesian school, Haller soon rejected with disdain that logic and philosophy, which tended to
cramp

cramp his genius rather than extend his knowledge; and continued to cultivate history, poetry, and polite literature, but with as little order and method as might be expected from his years.

Haller, during his residence at Bienne, began a custom, which he afterwards followed through life, that of writing his opinion of the books which he perused, and making large extracts from them. His genius being also awakened by the romantic scenery of the country to poetical enthusiasm, he composed various pieces in the epic, dramatic, and lyric styles. He was at this time so entirely absorbed in this favourite study, that, on a fire breaking out in the house in which he resided, he rushed into his apartment, and rescued his poetry from the flames, leaving his other papers, with little regret, to destruction. Afterwards, when a more mature age had ripened his judgment, he was frequently heard to say, that he had preserved from the flames those compositions which he then thought the finest productions of human genius, in order at a future period to consign them to destruction as unworthy of his pen *.

In

* Many of his biographers have confounded these two facts; and, from a natural proneness to exaggeration, have asserted,

In this period of his life, Haller compares himself to a wild plant, which is left to grow without pruning; and this very circumstance was probably the principal cause of his future proficiency, and the foundation of that universal knowledge, to which he afterwards attained.

He had been originally intended for the law: but his active mind could not submit to follow a profession which would limit his inquiries; which entirely depended on precedent and authority; and which, to use his own quotation from Horace, in a letter to his friend Bonnet, obliged him,

Jurare in verba magistri.

asserted, that at Bienne, Haller, with a greatness of mind above his years, burned his poetical compositions, from a strong conviction, that poetry tended to alienate his mind from the severer studies: whereas, the very contrary happened. He saved his poetical pieces in preference to his other papers, and burned them afterwards, because they would have disgraced his reputation: although, as juvenile productions, they were not wholly without merit. I have in this instance preferred the authority of his particular friends, Balthasar and Tscharner, to his other biographers, who had not such opportunities of obtaining the truth. Besides, as a confirmation of their evidence, Haller did not intermit his poetical studies; and wrote at Tübingen his *Morgen-gedanken* and *Sehn-Sucht*, which are the earliest specimens he ever gave to the public.

And

And although he could not submit to the shackles of that narrow philosophy, so strongly recommended and enforced by his new preceptor, yet he appears to have been principally determined by his advice to dedicate himself to physic; the study of which comprehends such a variety of literary pursuits, as seemed congenial to the zeal and activity of his capacious mind. He had no sooner formed this resolution, than he adopted a more regular and uniform plan, than he had hitherto been able to pursue. For this purpose he removed, towards the end of 1723, to the university of Tubingen, where he prosecuted his studies with that unwearied application, which never forsook him, under the professors Elias Camerarius and Du Vernoy. From Camerarius he learned those sound principles of rational philosophy, which teach us first to doubt, and afterwards to believe; and which are as far removed from credulity on one hand, as from scepticism on the other. From the lectures of Du Vernoy he imbibed his first taste for botany, and made so rapid a progress in the study of anatomy, that his master predicted, from several dissertations, his future proficiency in that line. Notwithstanding, however, his strong and inviolable attachment to these two branches of natural history, he represents himself as studying,

invita minerva, against nature; anatomy though he could not support bad smells, and botany though he was extremely short-sighted. At Tubingen he also distinguished his knowledge in mineralogy by refuting the error of Tournefort, in ascribing to fossils a vegetating power.

During his continuance in that university, he gave an instance of his early controul over his passions; a difficult conquest for a young man of strong feelings and lively imagination. A single deviation into excess, into which he had been hurried by the example of some of his fellow-pupils, so greatly affected a person like him, no less enamoured of virtue, than susceptible of ingenuous shame, that he instantly formed a resolution to abstain from wine; and adopted a strictness of morals, which renders highly probable the assertion of his French encomiast, the Marquis de Condorcet, that he was descended from a family, in which piety might be said to be hereditary.

In 1725, Haller repaired to Leyden, to which place he was drawn by the great reputation of Boerhaave. Here he found a more ample field for a display of his abilities, and the improvement of his mind. He became the favourite scholar of Boerhaave, by whose example and encouragement he strengthened his growing inclination

clination for botany. He noted down his master's lectures on the *Institutes of Medicine* with such precision, as afterwards gave birth to one of his most useful publications. He continued his anatomical studies under Albinus, just then rising into fame, and the venerable Ruysch, who so highly improved the art of injecting anatomical preparations.

The precarious state of his health, probably occasioned, or at least increased, by his intense application, induced him to accompany two of his countrymen through part of Germany. On his return, in 1726, he received his doctor's degree, though only in the nineteenth year of his age; and published on that occasion his inaugural dissertation *de Duëtu salivali Coschwiziano*.

In 1727 he visited England, was favourably received by Cheselden, Douglas, and Sir Hans Sloane; and improved his knowledge of medicine and surgery under the auspices of those celebrated men, and by diligently attending the hospitals.

At Paris, whither he next directed his course, he studied botany under Geoffroy and Jussieu; anatomy under Le Dran and Winslow, a celebrated surgeon. Winslow was indeed his favourite master, to whom he particularly attached himself;

himself; whom he proposed to his disciples as the best model for their imitation, as an anatomist, who, shackled by no system, described simply and faithfully what he himself observed in his dissections.

Haller had proposed to continue his travels to Italy, that country where medicinal knowledge first revived in the darker ages, and where,

“ Smit with the love of sacred song,”

he might indulge his enthusiasm and improve his taste in classical literature. The uncertain state of his health; the *maladie du pays* which so remarkably affects the Swiss in foreign parts, and on which he has composed a poem, together with the advice of his friends, prevailed over his inclination, and induced him to return to his native country.

In his way to Berne he stopped at Basle, in order to study mathematics and algebra under the celebrated John Bernoulli; and in this, as well as every other instance of his life, applied with such indefatigable perseverance, as if those sciences were to form the sole object of his future researches. His proficiency in these studies is sufficiently proved by several treatises still extant in manuscript, which he composed on arithmetic and geometry, and particularly by his re-

marks on the Marquis de l'Hospital's Analysis of Infinitesimals; and his attachment to them by his being deeply employed in a profound calculation on the day of his marriage. But though he made such a progress as astonished Bernoulli himself, he continued his other pursuits, being appointed to read lectures on anatomy during the sickness of the professor: while he fulfilled the duties of that office, he also attended the lectures of Tzinger on the practical parts of medicine; thus at the same time displaying, with equal propriety, the dignity of a professor, and the humility of a pupil.

During the summer of 1729, he, in company with his friend John Gesner, made an excursion into the mountains of Switzerland; an excursion rendered memorable by its suggesting to him the plan of a *Flora Helvetica*, and by inspiring his poem on the Alps, which he composed in the 21st year of his age; a poem as sublime and immortal as the mountains which are the subject of his song. Not to interrupt these biographical anecdotes with a chronological detail of his poetical productions, I shall just mention, that, not long after his poem on the Alps, he wrote his ethic epistles, on the Imperfection of Human Virtue, on Superstition and Infidelity, on the Origin of Evil, on the Vanity of Honour, Various

rious Satires, Doris a Pastoral on his first wife, and his much admired Elegy on her death. It is a convincing proof of Haller's versatile genius and extraordinary mental powers, that he should have so eminently excelled in poetry, which, except in his early youth, he never considered otherwise than as an amusement, either to sooth him under afflictions, and in the bed of sickness, or to console him for the envy and neglect of his contemporaries.

The soundest German critics place Haller among the most eminent of their poets; and consider sublimity as the grand characteristic of his writings. They acknowledge, that he improved the harmony and richness of his native tongue; that he possessed the highest powers of invention and fancy; great originality both in his ideas and language; that he is the true colourist of nature; that he sounded the depths of metaphysical and moral science; that he equally excels in picturesque descriptions, in soft and delightful imagery, in elevated sentiments, and philosophical precision. A few supercilious critics have reproached his poetry with occasional obscurities; and accuse him of having introduced a new language affectedly averse to the common modes of diction. Cold criticism may censure; but twenty-two successive editions of his German

R 2 poems,

poems, and the translation of them into the principal languages of Europe, prove, that they possess the great aim of poetry, that of pleasing and interesting the reader. And it may be remarked with truth, that although Haller's stupendous labours in erudition and science render his poetical talents of inferior account; yet that if he had confined himself to poetry, that alone would have immortalized his name.

But it is time to follow Haller to his native city, where he returned, in 1729, expecting from his countrymen that respect and patronage, he had so liberally received abroad. He had, however, the mortification to experience that neglect, and even envy, to which every man of genius is exposed in his own country, and which he seems to have augmented by his satirical compositions.

He continued three years without having the interest to procure any public employment; and, though he prevailed on Government to establish an anatomical theatre, and gave lectures gratis; yet he did not succeed in obtaining the place of physician to the hospital, which he much desired. He also solicited a professorship, and was again repulsed. He seems to have sensibly felt these disappointments; and he expressed his impatience and indignation in his satirical poems. Instead,
however,

however, of damping his activity or abating the ardour of his genius, he redoubled his application and services in order to force himself into public notice.

The first distinguishing tribute to his literary talents was paid by the Royal Society of Upsala, which, in 1735, chose him a member. This election was the prelude to more honourable and beneficial employments. In the same year his countrymen at length acknowledged his merit, by appointing him director of an hospital and public librarian. In the former situation he distinguished himself by his zeal and humanity; in the latter, he bestowed great pains in arranging the library, and in forming the first catalogue. Scarcely any branch of literature, however remote from his usual occupations, was omitted by Haller, whenever an opportunity presented itself, either of improving his general knowledge, or of being useful to science. Finding in the public library a collection of antient medals, which had been hitherto neglected; he took considerable pleasure in classing them. His love of history led him to pay great attention to the study of medals, which he justly considered as the most authentic documents of historical truth, and the most certain monuments to ascertain the ever-fluctuating state of language.

His literary reputation began now to spread itself by various botanical, anatomical, and medical publications, and by a collection of poems*, which first made its appearance in 1732.

At length, in 1736, he received, unsolicited on his part, the offer of the professorship of physic, botany, and surgery, in the university of Gottingen, newly established by George the Second. Notwithstanding, however, all the advantages and honours which accompanied this offer, he, for some time, hesitated whether he should accept it. He had, in 1731, espoused a young lady of good family, whose great beauty and accomplishments were rendered still more endearing by her affectionate subserviency to his manner of life. She had brought him three children; and these ties attached him more strongly to his native place, where his merits had procured him many sincere friends; and the air of which he considered as in some respect necessary for the continuance of his health. On the contrary, the honour of being invited by so great a monarch, the dignity of the establishment to which he was called, and the consideration of having a more ample theatre for the improvement of his knowledge, induced him to remove to Gottingen.

* *Versuch Schweitzerischer Gedichte.* The best edition is printed at Berne, 1775.

He quitted, however, Berne with much regret; presaging, as it were, the heavy stroke which overtook him soon after his arrival in that university. He lost his wife. The death of his beloved Marianne, whose memory he has celebrated in a pathetic elegy, afflicted him so deeply, that it almost brought him to the grave. In this crisis of despondency he redoubled his application, as the most probable means of subduing his sorrow; and the duties of his station forced him from the contemplation of his own grief into public life.

During seventeen years, in which he resided at Gottingen, where his abilities expanded in proportion as his opportunities of acquiring knowledge increased; he obtained from government the establishment of a botanical garden, which he superintended, of an anatomical theatre, a school for midwifery, and a college for the improvement of surgery. He formed the plan for a Royal Society of Sciences, of which he was appointed perpetual president.

The comprehensive mind and versatile genius of Haller, united with his unremitting diligence and ardour in all his pursuits, enabled him to cultivate, with uncommon success, a variety of knowledge. Had not the great Swede pre-occupied the field, it is probable, that Haller

would have stood the first among his contemporaries as an improver of botanical knowledge*. Yet botany was not among his earliest pursuits, for he informs us, that he had made no advances in it until his return from his travels: during his residence at Basle, in the year 1728, as if inspired, he says, by the genius of that place, which had nurtured the Bauhines, and where at that period botany was successfully cultivated by Stahelin, he laid the design of his future Flora. From this time he made annual journeys into various parts of Switzerland, and principally among the Alps. He cultivated the correspondence of the most eminent botanists; particularly with Scheutzer, Ludwig, Linnæus, Van Royen, and Dr. John Gefner of Zurich, who had also meditated a design to publish a Swiss Flora, and freely communicated his materials to Haller.

His establishment at Gottingen afterwards enlarged his views and opportunities; and at length, in 1742, his great botanical work on the plants of Switzerland, the result of fourteen years study, made its appearance. It was entitled, *Enumeratio Methodica Stirpium Helvetiæ*, in 2 vols. folio.

* I should not have presumed to have given any detailed account of Haller's botanical, medical, or anatomical works, if I had not received assistance on these subjects from my very judicious friend Dr. Pulteney.

It was the most copious Flora the world had ever seen, comprising 1,840 species, and was enriched with several advantages, that rendered it singularly acceptable. The preface contains a compendious geographical description of Switzerland, and of the Alps particularly; an account of all the authors who had written on the plants of that country; the recital of his own journies; acknowledgments to those who had assisted him; concluding with the order and method he means to pursue in this work.

After the preface follows a chronological account of 268 volumes, which he cites in the work, each accompanied by a general character; in which, with great candour and impartiality, he points out the merit or demerit of the author, in the manner which he afterwards pursued in the *Methodus Studii Medici*, and in the *Bibliotheca Medicinæ*. This is in reality a very useful and entertaining part of his work, inasmuch as it forms almost a history of the progress of the science, from the time of Brunfelsius to his own.

He next delineates his own system of botany, according to which the plants are disposed. Throughout this great work, Haller is entirely an original: not satisfying himself with giving the descriptions of former writers; he appears every where to have described the plant himself,
and

and to have formed new genera, and commonly new specifical characters for the whole, accommodated to his own system. He informs us, that it was his custom to write down the natural characters of each plant on the day he found it.

In treating on each species, he has not only added a most copious number of synonymes, but, unsatisfied with Bauhine's Pinax, he appears to have consulted all the old authors, and extricated their synonymes, with uncommon diligence and singular discrimination. And these are arranged, as much as possible, in chronological order; a method highly worthy of imitation, as it exhibits at one view, a brief history of the plant, by pointing out the first discoverer, and the regions of its growth. This, to the curious botanist, is a very meritorious part of Haller's labour. To each is subjoined a summary account, from the best writers, of the qualities and uses, both æconomical and medical. The work is embellished with plates of some rare species, remarkable for their exactness and delicacy.

Having, in 1741, obtained from the king of Great Britain the establishment of the physic garden at Gottingen, Haller published the following year a catalogue of its plants. This was but a small volume, but the list served to shew the diligence with which he had fulfilled the intention

tion of the royal founder. In 1753 he much enlarged it, and comprehended the plants spontaneously growing in the environs, especially those of the Black Forest. He informs us that this volume was the production of a three months vacation, and laments that the importance of his other avocations, prevented him from fulfilling his intention of describing the plants of Germany at large.

This little work is curious, since it exemplifies his system as extended to exotics, of which the new and rare kinds are herein described. But the small size of the volume precluded the introduction of the generical characters.

In 1745, he gratified the botanists by a new edition of the *Flora Jenensis* of Ruppis; and, that he might do justice to his author, he took a journey to Jena, where he gained access to the papers and *hortus ficcus* of the author. He prefixed to this book anecdotes of this extraordinary man; and, by reforming the whole, and augmenting it with many plants, discovered by himself, he in some measure made it a *Flora Germanica*. These performances were by no means the termination of his botanical labours. On his return to Switzerland he continued his discoveries in this branch of natural history; he also sent, at his own expence, persons properly qualified

lified into the less frequented parts of Switzerland.

The result appeared in a new edition of the *Enumeratio*, which however was so much improved and altered, that he considers it as a new work. It was published in three vols. fol. in 1768, under the title of *Historia Stirpium indigenarum Helvetiæ, inchoata*. The subject is arranged in his own method, with the alteration however, of inverting the order of the classes, beginning with the *Compositæ*, or the *Syngenesia* class of Linnæus, and ending with the *Cryptogamia*, which stood first in the *Enumeratio*; both of which are objectionable, as subjecting the student to the most difficult parts of the system at his entrance on the study. Several interesting particulars of the former publication are also omitted in these volumes, of which curious botanists will much regret the loss: for, though he has inserted, with enlargement, the physical geography of Switzerland, together with the account of those authors who had previously investigated the plants of the country, and has recited his own excursions for that purpose; yet he has not introduced the critical catalogue of the authors, satisfying himself with giving a bare list of all the botanical writings, from the time of Theophrastus to the year 1768. It is still more

to be regretted, that Haller has suppressed, in this edition, a great number of synonymes under each plant; inserting only a few of those of later date. It may further be remarked, that although in all possible instances he has introduced the synonymes of Linnæus, yet he has, unfortunately for such as use the works of both, omitted Linnæus's trivial names; a circumstance which renders his book much less useful to those who are conversant in the sexual system. Yet, if these are defects, they are doubtless more than compensated, by the innumerable improvements made in the descriptions, both of the genera and species, by the great addition to the number of plants, which are extended from 1840 to 2486, of which more than 800 are of the Cryptogamia class; Haller having, after Micheli, beyond any of his contemporaries, enlarged the order of Fungi, of which he tells us, he had the paintings of more than 400 species drawn under his own inspection. It is not, however, surprising, that Switzerland should produce a greater variety of vegetables than the middle parts of Europe; when we reflect that the alpine situations afford growth to the plants of the arctic regions, and the warm vallies of the same country, to many of those common to southern. The value of this edition is much enhanced by enlarging the observations

observations on the uses of plants; and by referring to his authorities for what is not his own, with his accustomed accuracy. As an accession to this work, it may be added, that the author has, in the notes, under each genus, introduced the plants of Theophrastus and Dioscorides, in as many instances as they admit of being ascertained.

Few botanists have laboured more than Haller; and yet his discoveries in botany occupied only a comparatively small portion of his time.

To such as feel not, in the fullest extent, that enthusiasm which the love of science creates, it may appear a paradox to assert, that the dissection of human bodies could be a pleasurable employment; yet Haller, in 1742, pronounced an elegant and spirited eulogium, in the university of Gottingen, to prove it; and his zeal in the pursuit of anatomical discoveries was attended with uncommon success. He seems early to have apprehended, that the knowledge of the distribution of the arterial system, had not kept pace with that of the bones, muscles, nerves, and viscera, which had been separately and ably treated by men of eminence. Haller, therefore, wished to illustrate more perfectly this part of the human body; and he gave to the world

world a more complete system on the subject than had yet appeared. He published the first part of this great work in 1743, and the last in 1756. His tracts on other parts of anatomy, when collected in 1768, form three vols. in 4to. Those who are curious, may see an enumeration of his many discoveries in anatomy and physiology, at the head of the sixth volume of his Physiology: and although some of these may have been contested by his contemporaries; yet his unalienable right to most of them, and the light particularly which he threw upon incubation, ossification, irritability, and several other parts of the animal œconomy, will unquestionably secure to him a large and honourable share of fame with posterity.

Haller's emoluments augmented as his merits were displayed; and honours flowed upon him from all quarters. He was elected, in 1748, into the Royal Society of Stockholm, into that of London in 1749, and in 1754 chosen one of the eight foreign members in the Academy of Sciences at Paris. In 1739 he was appointed physician to George the Second, and king's counsellor in 1740. In 1749 the emperor Francis conferred on him letters of nobility at the request of George the Second; and about the same time the king, in a visit which he paid to the university,

distinguished Haller with particular marks of approbation: an honour which the author gratefully acknowledges, in an English publication, intitled, "A short Narrative of the King's Journey to Gottingen," and in the dedication to George the Second, prefixed to his edition of Boerhaave's *Methodus Studii Medici*.

He declined, in 1745, an invitation to Oxford, which would probably have terminated in his nomination to the professorship of botany, vacant by the death of the celebrated Dillenius; a second from the university of Utrecht; and, in 1750, a third from the king of Prussia, with the offer of a very considerable pension.

But of all his promotions, none gave him more real satisfaction, than his election into the Great Council of Berne, as it ensured to him a retreat accompanied with dignity, and probably with emolument, in his native city, to which he looked forward with affection and attachment.

At length, in 1753, induced by the precarious state of his health, by the desire of removing from Gottingen, which he called the *grave* of his wives*, and

* Haller was three times married, first to Marianne Wytzen, in 1731, who died in 1736. 2. To Elizabeth Buchers, in 1738, who died in childbed the same or the following year; both

and by his earnest anxiety to dedicate the remainder of his days to the service of his country, he took a journey to Berne, in order to procure an esta-

both natives of Berne. 3. In 1739, to Amelia Frederica Teichmeyer, a German lady, who survived him. He has written and published the lives of his two first wives. He left eight children, four sons and four daughters: all of whom he lived to see established. His eldest son, Gotlieb Emanuel, who was born in 1735, followed his father's example in dedicating himself to the service of his country, and to the pursuits of literature. He was elected member of the Great Council, and obtained various employments under government, particularly the bailliage of Nyon, in which situation he died in 1786. He distinguished himself as an author by various publications tending to illustrate the history and literature of Switzerland, and particularly by his *Schweitzer-bibliothek*, or Swiss Library, in 6 volumes 8vo. of which he lived to publish only the first. In this work, deservedly esteemed for its method and accuracy, the indefatigable author enumerates all the books which treat of Switzerland, in all languages, and all the works published by the Swiss on all subjects. He even descends to the minutest articles which have appeared in reviews and journals; and in most instances, where the publication deserves detail, analyses the contents, corrects the errors, and gives his opinion on the merits of the performance.

I was personally acquainted with the learned author, and am indebted to him for some curious information on Switzerland, and for several anecdotes relative to his illustrious father, which I have introduced into these biographical memoirs.

blissment, which, though not adequate to his present appointments, might place him in the bosom of his beloved Switzerland. Soon after his arrival, he fortunately obtained by lot the office of Amman : although this office was of small emolument, yet, as it might be considered a prelude to future appointments, and as it gave him an immediate opportunity of serving his children, he resigned his professorship at Gottingen, and settled at Berne. Such was the general joy of his countrymen on this event, that Morikosoof struck a medal to commemorate his return.

Having formed this resolution, he could not be shaken by the most splendid offers. He declined, in 1755, the pressing invitation of Frederic the Second, to superintend the academies of Prussia, and to accept the chancellorship of the university of Hall, vacant by the death of Wolfe. In 1767, he rejected the offer of a very advantageous and honourable settlement at St. Peterburgh, made by Catharine the Second ; and, in 1770, the still more dignified promotion to the chancellorship of the university of Gottingen, with a very considerable appointment ; although George the Third wrote not only to Haller, but to the Senate of Berne, requesting their influence to persuade his acceptance of it.

His

His grateful country rewarded this disinterested attachment with the most liberal and unbounded confidence, and employed his talents in the public service.

In 1757, he was sent to reform the academy of Lausanne; and, in the following year, was deputed by the Senate to examine some curious remains of antiquity lately discovered at Culm. About the same time he was appointed director of the salt-works at Bex and Aigle, with an annual salary of £. 500. During the term of this appointment, which continued six years, he resided at La Roche.

In this retirement, he employed himself in superintending and improving the salt-works, of which he has given a short account; in making occasional excursions into the neighbouring country, which he has likewise described; but more particularly distinguished his retreat by preparing and publishing his great work on physiology.

Notwithstanding the amplitude and success of Haller's labours in the various branches of medical knowledge, it was, however, principally on physiology, which seems to have been his peculiar delight, that he displayed the whole force of his genius, and that he founded his merit as an *inventor* in science.

His Outlines of Physiology, or *Primæ Lineæ Physiologicæ*, published at Gottingen in 1747, delineate the plan, and were the prelude to his immortal work, which he modestly styles *Elements* only, or *Elementa Physiologiæ corporis humani*, in eight volumes in quarto, which successively made their appearance from 1757 to 1766.

In conformity to Boerhaave's plan, this part of the science of physic is here emancipated from theoretical subtlety, from the shackles of metaphysical, mechanical, and chymical hypotheses, with which, for ages, it had been incumbered; and, for the first time, built on the true basis of anatomical knowledge.

It will be sufficient to observe, that the exquisite knowledge which he has displayed in relation to the structure of the human body, his indefatigable researches into the facts and opinions of all his predecessors, the judicious selection of them to establish his own, his skill in comparative anatomy, the extent of his own discoveries, and the application of the whole to illustrate the use of the parts in the human frame, afford such an instance of learning, industry, penetration, and genius, as will undoubtedly transmit the author's name to posterity among the greatest contributors to useful knowledge.

On

On his return to Berne he was elected member of the chamber of appeal for the German district, of the council of finances, of the committees for matrimonial affairs, and for improving the small livings in the French district of the canton: he was also appointed perpetual assessor of the Council of Health, with an annual salary of about £. 100, as a token of his country's gratitude for having declined so many splendid offers from foreign courts, and for preferring his native place to the advancement of his fortune.

In these several offices he performed essential services to the state, by promoting the most useful institutions, proposing necessary alterations, and in framing new laws and ordinances. In his capacity of assessor to the Chamber of Health, he was particularly useful in forwarding the most important regulations; such as the prohibition of empirics, the recovery of drowned persons, and the means to prevent the spreading of the infectious distemper then prevalent among the cattle in various parts of Europe.

He also shewed himself a friend to humanity, by the zeal with which he assisted in obtaining from government a public establishment for orphans, by his activity in providing it with a fund, and by drawing up the

plan. As a member of the Œconomical Society, he laboured much to improve the state of agriculture, and made many experiments conducive to that end. In the meetings of the Great Council he delivered, on important occasions, his opinion with a manly freedom and lively eloquence, the result of the soundest judgment and the most feeling heart.

In 1766, and the following years, this great man, who had hitherto enlightened science from his closet, displayed in the theatre of public life the more active and distinguished parts of a patriot and politician. He re-established the harmony and settled the disputes between the Valais and the canton of Berne by a successful negotiation, in which he fixed the new boundaries of the two states; he was associated with the most enlightened characters of the republic in terminating the dissensions of Geneva; he drew up the principal dispatches to the court of Versailles on the subject of the changes which had been projected at Versoi, on which occasion he held a personal conference with the French ambassador; and was employed to prepare the plan of a treaty, which the canton of Berne contracted with the Elector of Bavaria relating to the purchase of salt.

On

On the conclusion of these public employments, Haller, who had now attained the sixty-second year of his age, withdrew himself from the bustle of life, and lived in a more retired manner, fulfilling the duties of a father, a citizen, and a magistrate; and, although his health gradually declined, yet his activity still remained undiminished.

He resumed his literary labours, which had been necessarily interrupted amidst his other more important avocations. - He published, in 1768, his history of Swiss plants, mentioned above: and, in 1771, the first part of his *Bibliotheca Medicinæ*, or his Medical Library.

No part of Haller's writings affords a more striking example of the value of early and persevering industry, than this publication. That habit which he had formed, so early as from the eighteenth year of his age, of noting his opinion of books and authors, necessarily accumulated a considerable mass of materials; and thus enabled him afterwards to turn them to very useful purposes.

By these means the foundation of his *Medical Library* was laid, even before he gave the improved edition of Boerhaave's *Methodus Studii Medici*, in 1751.

Boerhaave used to recommend to his students the books which they ought to consult on each subject: this catalogue was, in 1726, surreptitiously and inaccurately printed, and formed only a small volume in octavo; many necessary observations were forgotten, and various authors both modern and antient were omitted. Haller undertook to remedy these deficiencies; and extended the publication to two volumes in quarto. In order to appreciate the merits of this compilation, it is necessary to observe, that various lexicons and catalogues of medical authors were extant; but the writers had merely given bare lists and titles, unaccompanied by that critical discrimination of the design, doctrine, and general merit of each author, which rendered these volumes so highly acceptable. In this manner Haller has given, under that classical method which Boerhaave had formed, his opinion of more than 4,000 volumes.

In the extension of this plan, as it appears in his own *Bibliotheca*, Haller begins, by tracing the history of each branch of medicine from its origin, through the preceding ages; and by connecting the history of each in the several periods, has, in some measure, made his publication a compendious history of physic.

Haller's

Haller's extensive knowledge of antient and modern languages, enabled him to comprehend a large field; and his indefatigable industry, united to great penetration in investigating the doctrines of the antients, equally exhibits his erudition, and that sound judgment by which he has appreciated the merit of those sages of physic, in a manner highly interesting and instructive.

In his judgment of the moderns he is candid and impartial; his great knowledge of his subjects qualified him to distinguish all original doctrines, new facts, and observations, and to guard against such errors as might mislead young and incautious practitioners; who are but too apt to be influenced in their practice, by imbibed theories, and prejudice towards particular authors.

He has given additional value to his work, by annexing to the account of celebrated books, short biographical anecdotes of the author. He mentions all the different editions, that came to his knowledge, and particularly marks such as were in his own library. And it is a matter of astonishment, that in this manner he notices and reviews not fewer than 11,000 volumes. As the literary history of physic was among the favourite objects

objects of Haller, this publication cannot but be highly acceptable to such as possess a congenial taste; while the general use and information they afford are sufficiently obvious.

Eight volumes of this work were published during the author's life-time, between the years 1771 and 1778. The anatomical, including the physiology, the botanical, and the chirurgial, were each comprized in two volumes, and bring down the respective subjects nearly to the present time. Two, on the practice of physic, were published by Haller himself, and a third after his decease by Dr. Tribolet.

He also employed the latter period of his life in sending extracts from eminent publications for the *Bibliothèque Raisonnée*; furnished many of the articles for the supplement to the Paris Encyclopédie, for the quarto improved edition of the same work published at Yverdun, and for the dictionary of natural history printed at the same place. He meditated also a new edition of his great physiological work, of which he put forth the first volume in 1777, only a few months before his death.

His active imagination brooding on the civil and political affairs, in which he had been lately engaged, produced, between 1771 and 1774,
his

his three political romances, *Ufong*, *Alfred*, and *Fabius and Cato*, which treat of the despotic, monarchical, and republican governments. In *Ufong* he sketches, with a masterly hand, the abuses of absolute authority, and sets forth, in the character of the principal personage, the happy effects which may be derived from a virtuous and intelligent sovereign, even amidst the horrors of oriental despotism. In *Alfred* he displays the advantages of a limited monarchy, wherein the balance of power is wisely distributed; and which, while it avoids the extremes of either, enjoys the benefits of both. In *Fabius and Cato* he describes, with an animation and spirit worthy of antient Rome, but with a partiality natural to a republican, the aristocratical government as most friendly to the display of patriotism, and most congenial to the exertions of genius. In these romances he discovers sound principles of legislation, great political sagacity, a deep insight into human nature, and a most extensive acquaintance with history.

If we consider Haller as a man of piety and a Christian, we shall observe him tracing, from a comprehensive view of the creation in its grandest as well as in its minutest parts, the *necessary* existence of a Supreme Being, and the great principles

principles of natural religion. We shall see him demonstrating the divine origin of Christianity from a profound study of the New Testament, from the excellence of its morality, its manifest influence over the happiness of mankind, and its tendency to meliorate our nature; and we shall find him proving himself, both in his life and writings, a zealous friend and able advocate of the revealed doctrines.

Haller, at a very early period of his life, undertook the defence of natural and revealed religion on all occasions. In 1732 he declared, in his preface to his poetry, that he was firmly convinced of their truth; in 1747, he rejected with horror the dedication which La Metrie offered to prefix to his work entitled "*L'Homme Machine*;" and he declared, in various literary journals, that he neither acknowledged as his friend, or his disciple, a man who entertained such impious notions. In a preface which he published in 1751, to Formey's abridgement of Crouzas's "*Examen du Pyrrhonisme*," he paints, in the strongest colours, the dreadful effects of infidelity both on society and individuals. He also put forth, in the German tongue, "Letters to his Daughter, on the Truth of the Christian Revelation;" he published an extract from Ditton's "Truth of the Resurrection of Jesus Christ," which he acknowledges

knowledges to have first cleared any doubts he might entertain on that subject. He avows, at the same time, that he received infinite satisfaction from the study of the New Testament, because he was never more certain of holding converse with the Deity, than when he read his *will* in that divine book.

In 1775, he finally gave to the public, also in the German language, "Letters concerning several late Attempts of Freethinkers yet living against Revelation." In this work the author examines and refutes the objections to Christianity, advanced in so lively and dangerous a manner by Voltaire in his *Questions sur l'Encyclopedie*. "If this latter publication," adds Sennebier, "may be considered as an Index to the Doubts and Arguments against the Christian Religion, the work of Haller may be entitled an Index to the Answers in favour of the same Revelation, to be consulted by those who wish impartially to discuss both sides of this important question." When learning and philosophy, instead of being employed in supporting sceptical tenets by artful sophistry, thus lend their united assistance to the cause of religion, they then truly become an honour to the possessor, and a benefit to society.

Even this great and good man was not exempt from a too anxious solicitude for his welfare

fare in a future state. That depression of spirits, which ought justly to be considered as the effects of disease, and the warmth of his imagination conspiring perhaps with the narrow principles of Calvinism, in which he had been educated, led him to reflect rather on the *justice* than the *mercy* of the Deity, and to bewilder himself in the endless mazes of predestination and grace. In one of his desponding fits, he compared himself, as uncertain of salvation, to a man placed on the edge of a precipice without any support, and expecting every instant to fall. At another moment, animated with a passion for science, he breaks out, in a letter to his friend Bonnet, into the following exclamation, expressive of his regret to quit a world which he had improved by his discoveries, and which he might still further illuminate by his zeal and application. "O my poor brain, which must return to dust, and all the knowledge and information, which I have been collecting with such unwearied labour, will *fade away* like the dream of an infant."

These little weaknesses of a great mind overpowered by constitutional irritability, and struggling against early prejudices, are more interesting to the man who feels and respects the imperfections of human nature, even in its most exalted

alted state, than the most pompous and exaggerated accounts of *unerring* wisdom, or *uniform* virtue, which never existed. And it is a pleasing satisfaction to learn, that reason and religion rose superior to the gloomy despondency of sickness; and that Haller met death with the calmness of a philosopher, and the faith of a Christian. In the last letter which he wrote, a few days before his decease, he speaks indeed of the tremendous grandeur of eternity, but with hopes rather than with fears; and looks back upon his past life with satisfaction: amidst a few complaints uttered on his painful sufferings, he mentions his country with the most ardent affection, and offers up his last prayers for its preservation and welfare. He continued his literary labours, and preserved his senses and composure to the last moment; he beheld his end approaching without fear and regret; "My friend," said he to the physician who attended him, "I die, my pulse is stopped," and then expired. He died on the 12th of December 1777, in the seventieth year of his age.—Thus lived, and thus died, the great Haller; a man to whom Michaelis, the eminent orientalist, justly applies an observation which had been made on the genius of Aristotle; "*Neque cælo, neque terrâ, neque mari quicquam relinquere voluit incognitum,*"

cognitum, indole præterea adeo mirabili, ut ad singula natum præcipuè dicas."*

In his person Haller was tall and majestic, of a serious and expressive countenance; he had at times an open smile, always a pleasing tone of voice, usually low, and seldom elevated, even when he was most agitated. He was fond of unbending himself in society, was on those occasions remarkably cheerful, polite, and attentive; he would converse with the ladies on fashions, modes of dress, and other trifles, with as much ease as if he had never secluded himself from the world.

Mr. Bonnet informed me, that Haller wrote with equal facility the German, French, and Latin tongues; that he was so well acquainted with all the European languages, except the Russian, Polish, and Hungarian, as to speak with the natives in their respective idioms. When he conversed on any science or subject of literature, his knowledge was so extensive, that he seemed to have made that his particular study. His profound erudition in every branch of science, is well known to all who are conversant with his

* He left nothing unexplored, either in the heavens, on the earth, or in the sea, and was of such a wonderful capacity, that he seemed born for the immediate object of his pursuit.

works: but the variety of his information, and the versatility of his talents, are thus delineated by a person * who was his particular friend. " He possessed a fundamental knowledge of natural history; was well read in history both ancient and modern, universal and particular; and uncommonly versed in the state of agriculture, manufactures, trade, population, literature, and languages of the respective nations of Europe: he had read with attention the most remarkable voyages and travels; and was particularly conversant in the late discoveries which tend to illustrate the geography of the globe. He had even perused many thousand novels and plays; and possessed such an astonishing memory, that he could detail their contents with the utmost precision.

As it was his custom to make extracts, and to give his opinion of every book which came into his hands, as well for his own private use, as for the Gottingen Review †, he read most new publications, and so eager was he usually in the perusal, that he laid them upon the table even

* Tschärner Lobrede, &c. p. 87.

† Haller reviewed, as his department for that literary journal, all publications on history, medicine, anatomy, natural history, and several miscellaneous works, particularly those which appeared in Italy.

when he was at dinner, occasionally looking into them, and marking those parts with a pencil, which he afterwards extracted or commented upon. He was accustomed to make his remarks on small pieces of paper, of different sizes, which he placed in order, and fastened together; a method he learned from Leibnitz.

He derived from nature extreme sensibility, or rather irritability of temper, which is ever the child of genius. He spoke therefore from his own experience, when, in a letter to Voltaire, he thus expressed himself:—" Providence holds with an equal hand the balance of human happiness. He has loaded you with riches, he has loaded you with glory; but misfortune was necessary, and he preserved the equilibrium by giving you sensibility. If my wishes could take effect, I would bestow upon you that *tranquillity* which flies at the approach of genius, which is inferior to genius in relation to society, but far superior in regard to ourselves: then the most celebrated man in Europe should be at the same time the most happy *."

He

* Il faut bien que la providence veuille tenir la balance égale pour tous les humains. Elle vous a comblé de biens, elle vous a comblé de gloire; mais il vous falloit du malheur, elle a trouvé l'équilibre en vous rendant sensible.—Si les souhaits

avoiens

He was always impatient under sickness, as well from his extreme susceptibility of pain, as because he was precluded in that situation from his literary occupations. He was fond, therefore, of taking violent remedies, more calculated to remove the immediate effects of pain, and to check his disorder, than to cure it radically. In his latter years he accustomed himself to opium, which, operating as a temporary palliative, only increased his natural impatience. This restlessness of temper, which occasionally disturbed his tranquillity even in his younger days, and in the full flow of his health and spirits, was considerably heightened by the advances of age, and the disorders which shattered his frame towards the close of his days.

His correspondence in every period of his life was extensive, punctual, and carried on in the English, French, German, Latin, and Italian languages.

Six volumes of Latin epistles, and three in the German tongue, addressed to him from men of learning in various parts of Europe, have been

avoient du pouvoir, j'ajouterois aux bienfaits du destin; Je vous donnerois de la tranquillité, qui fuit devant le genie, qui ne le vaut pas par rapport à la société; mais qui vaut bien davantage par rapport à nous-même: des-lors l'homme le plus célèbre de l'Europe seroit aussi le plus heureux.

given to the public, but his own have never made their appearance. It is much to be lamented, that he seldom preserved any copies, being himself too much occupied for that purpose; and never sufficiently rich to maintain a secretary. His two principal correspondents, to whom he opened his heart, were Bonnet of Geneva, and John Gesner of Zurich: to the latter he wrote either in German or Latin, to Mr. Bonnet in the French tongue. This celebrated friend of Haller possesses seven manuscript volumes of his letters: it was an uninterrupted correspondence of twenty-three years; begun in March 1754, and finishing only a few days before his death, in December 1777. This epistolary commerce comprehends a great variety of subjects, principally concerning physiology, natural history, the structure of the globe, politics, morality, and religion. Haller being accustomed to consult his friend on all occasions, to disclose his most secret thoughts, and to relate his diurnal occupations; these effusions of the moment discover the successive train of his studies, the progress of his discoveries, and his gradual advances in knowledge.

“These letters of my most respectable friend,” added Bonnet, “display his genius, his understanding,

standing, and the goodness of his heart, more fully than any of his publications. His style, concise, energetic yet picturesque, corresponds with the strength and originality of his ideas; and he speaks, with no less sublimity than conviction, of the great truths of natural and revealed religion. Though he treats the numerous advocates for infidelity, and particularly Voltaire, with sufficient severity; yet his heat is the ardour of conviction, and did not proceed from either pique or spirit of contradiction: he seemed as if he was personally interested in all questions on revelation, and pleaded its cause as if it had been his own. He is no less severe against those writers, who seem to exclude the intervention of a first intellectual cause in the creation and arrangement of the universe, and particularly censures the materialists, who endeavour to deduce mechanically the formation of organized bodies. In a word, his philosophy was entirely practical, because it was entirely Christian; and nothing secured his approbation, but what tended to improve the understanding, or to amend the heart."

I am concerned to find, that the publication of this correspondence, between two such enlightened and virtuous philosophers as Haller and

Bonnet, which in some works had been announced to the public, should, on account of private reasons, be relinquished. Religion, morality, philosophy, and learning, would be greatly benefited by this epistolary commerce.

Haller's library, consisting of about 4,000 volumes, was purchased for £. 2,000 by the emperor, for the public library of Milan, where I examined it in 1785. The collection is particularly rich in books of natural history, and is rendered invaluable from numerous annotations of Haller, written on the margins.

LETTER

LETTER 58.

Mr. Sprungli's Collection of Swiss Birds—Of the
Bearded Vulture.

DURING my various expeditions through Berne, I never omitted visiting Mr. Sprungli's cabinet of natural history, which is remarkable for the collection of stuffed birds, both local and migratory, that are found in Switzerland.

In 1776 this collection consisted of two hundred specimens; and when I last visited Berne, in 1786, it had received an addition of fifty species.

As naturalists have long expected with impatience an account of this invaluable collection, I obtained from Mr. Sprungli the enclosed catalogue, which will assist me in attempting to form a *Faunula Helvetica* *.

One of the most remarkable birds in Mr. Sprungli's collection, is the *vultur barbatus* of

* See the Third Volume.

Linnæus, the *vultur aureus* of Gesner, or bearded vulture of the English ornithologists. As many fabulous tales have been related concerning its uncommon strength and rapaciousness; as great confusion has arisen from the variety of names applied by different naturalists to the same bird; and as some travellers have doubted whether this specimen is the large vulture of the Alps, or the golden vulture of Conrad Gesner; I shall here subjoin a description from particulars principally communicated to me by Mr. Sprungli himself, accompanied with a drawing of the head from the natural size.

This specimen was a female bird, caught in the canton of Glarus; it measured from the tip of the beak to the extremity of the tail, six feet six inches French * measure; and eight feet from the tip of one wing to that of the other expanded. It weighed, when first taken, eleven pounds. This bird, though always called a vulture, yet differs from that genus, and is referable to the eagle, in having the head and neck covered with feathers; whereas one of the distinctions of the vulture, according to Linnæus, is that the head is destitute of feathers.

Notwithstanding this distinguishing mark, by which it is referable to the eagle or *falco* genus;

* Six feet eleven inches $\frac{1}{2}$ English, and eight feet six inches $\frac{6}{13}$.



Head of the **BEARDED VULTURE** *from a*



a Drawing of the Natural Size.

yet Linnæus was probably induced to class it with the vultures, from the general form of the body, and shape of the beak, which is the *first essential* characteristic in the genera of birds.

Mr. Sprungli, however, is of opinion, that it might be classed between the vulture and the eagle; and Stor * proposes to form a new genus of it, under the name of GYPAETUS, by the following characters:

Rostrum rectum, basi cera instructum setis porrectis confertissimis barbatum; apice autem unco sulcato.

Caput pennis tectum.

The specific character he would define thus:

Gypaetus (grandis) albido-rutilus dorso fuscus, tænia nigra supra et infra oculos.

It inhabits the highest parts of the great chain of the Alps which separates Switzerland from Italy; it makes its nest in clefts of rocks inaccessible to man, and usually produces three young ones at a time, sometimes four; as may be judged from that number accompanying the old birds, when they descend into the lower regions for prey. They live on animals which inhabit the Alps, such as the chamois, white hares, marmots, snow hens, kids, and particularly

* See Stor's Alpen Reisen, vol. i.

lambs,

lambs, from which circumstance it is called *lammer-geyer*, or *lamb vulture*.

If common report may be credited, this rapacious creature sometimes attacks even man, and carries off children. Mr. Sprungli, without absolutely denying the possibility of this account, has, notwithstanding all his researches, never been able to ascertain a well-authenticated instance; and thence rather concludes it to be a fable invented by the peasants to frighten their children. This species does not appear but in small companies, usually consisting of the two old birds and their young.

Conrad Gesner has given a short but accurate description of this bird under the name of *vultur aureus*, or gold-geyer *; and an engraving from a skin sent to him from the Grisons. This figure, although rudely executed, yet exhibits with sufficient accuracy the distinguishing characters of the species and genus, such as the configuration of the beak, the legs feathered down to the claws, and particularly the beard. In fine, a comparison with the specimen in Mr. Sprungli's collection evidently proves that it is the same bird,

* See *Hist. Avium*, edit. Frank. p. 710.

Since

Since this great naturalist, no other person seems to have described it from nature, except Edwards, under the denomination of the bearded vulture. The description of that bird, and the engraving given by Edwards * from a specimen sent from Santa Cruz in Barbary, correspond exactly with the *vultur barbatus* of Sprungli; and the head, if compared with the drawing annexed to this account, will be found to answer sufficiently.

Mr. Sprungli also favoured me with the following remarks, in answer to those travellers who assert, that his specimen is not the large vulture of the Alps, sometimes called, from its *yellowish* plumage, the *vauteur jaune*, but a smaller species; because the larger sort measures sometimes fourteen feet, or more, from the tip of one wing to that of the other. He possesses two specimens of this bird; the one a full grown female, from which my description and drawing are taken, measuring eight French feet; the other is a male, but young, and is somewhat less. He has also examined four specimens, none of which measured more than nine feet; but as these several specimens were not full grown males, he is ready to allow, that an instance or two may possibly

* See tab. 106, of his History.

have occurred, in which this bird may have measured near twelve feet from tip to tip of the wing. Those who give it a greater expansion, have derived their information either from persons who were not naturalists, or from uncertain and exaggerated reports. The same remark may also be applied to the fabulous stories recorded by the peasants, concerning its wonderful strength as well as size. It is likewise to be observed, that the peasants do not confine the name of *lammer-geyer* to this species; but extend it indiscriminately to several large birds of prey, from whence has arisen great confusion of names, and much uncertainty in the accounts of this bird.

Some ornithologists seem to have formed of it several species; which on comparison will appear to be the same, or only varieties of the same species. Thus the bearded vulture, the cinereous vulture, and the fulvous vulture, which Mr. Latham has described as three different species, are probably the same bird as that in Mr. Sprungli's collection. Of the first there can be no doubt, since Mr. Latham refers to the bearded vulture of Edwards, which I have shewn to be that of Mr. Sprungli. The cinereous vulture is described by Latham after Brisson: "Beneath the throat hangs a kind of beard, composed of very narrow feathers like hairs; legs covered with feathers quite

quite to the toes, which are yellow; claws black*. This description accords with the bird in question, and particularly in the beard, which is the distinguishing characteristic.

The fulvous vulture of Latham is the griffin of Buffon; and the French naturalist doubts whether it is not a variety of Gesner's golden vulture, which is proved to be the same as Mr. Sprungli's specimen.

While the most celebrated ornithologists have thus given to the bird different names, they have also in other instances confounded it with other birds, to which it has no other resemblance than that of size, strength, and voracity.

Thus Buffon erroneously conjectures the *vultur gryphus* of Linnæus, or the *condor* of America, to be the same as the *lammer-geyer*, or vulture of the Alps; whereas the description of the condor given by Linnæus, as well as by those who had seen it, differs entirely from that of the bearded vulture. The condor is described by the Swede as having "the head destitute of feathers, but covered with a slight brown coloured down, with a comb reaching along the top of the head, and having the throat naked and of a reddish colour." Frezier, in his Voyage to the

* Syn. vol. i. p. 14.

South Seas, also thus describes the condor:—
 “ We one day killed a bird of prey called a condor, which was nine feet from the end of one wing to the end of the other, and had a brown comb or crest, but not jagged like a cock’s: the fore part of its throat is red without feathers, like a turkey; and they are generally large and strong enough to take up a lamb. In order to get them from the flock, they draw themselves into a circle, and advance towards them with their wings extended, that being drove together, and too close, they may not be able to defend themselves; then they pick them out and carry them off. Garcilasso says, there are some in Peru sixteen feet from the point of one wing to the other, and that a certain nation of Indians adored them.”

Mr. Latham seems also to be no less mistaken, when, on the authority of the translator of the Abbè Fortis’s Travels into Dalmatia, he conceives the *vultur percnopterus* of Linnæus to be the *vautour des Alpes* described by Conrad Gesner, and the same as Mr. Sprungli’s specimen; whereas, on the authority of Hasselquist, who saw great numbers of the *percnopteri* in Egypt, the head of that bird is “ naked and wrinkled;” and Ray says, the feet are naked; two characters that essentially distinguish it from the bearded vulture,

vulture, in which the head is wholly covered with feathers, and also the feet down to the ends of the claws.

The bearded vulture, besides inhabiting those Alps which separate Italy from Switzerland, is found in Corsica and Sardinia. M. de Hahn informed Mr. Sprungli, that he saw a bird in Corsica which was wounded in the wing, and shewed as a sight, that was unquestionably the same as Mr. Sprungli's stuffed specimen: and M. Lettel, in his Natural History of Sardinia, gives a figure and description of the same bird, under the name of *bartgeyer*, or bearded vulture. It has also been found in the mountains of Africa, since Mr. Edwards received his specimen from Santa Cruz in Barbary. It is also frequent on Caucasus and the mountains of Dauria, or the south-eastern part of Siberia, as we learn from the travels of both Pallas and Gmelin.

You will perhaps be surprised not to find among the Swiss birds in the annexed catalogue, the *aigle blanc*, or *aquila alba* of * Briffon; the *falco Italicus* †, and the *falco montanus* of the same ‡; as particularly *zwitzer-falk*, the German name of the latter, seems necessarily to imply that it must be a Swiss bird: Mr. Sprungli how-

* I. p. 424. † Ib. p. 336. ‡ Ib. p. 352.

ever assured me, that he never had been able to discover any of these species in the Alps; that probably the *aigle blanc*, if it exists, is a variety of the chrysaetos; and that both Briffon and Willughby do not cite Gesner for their descriptions of the *falco italicus*, but those only who have never been in the Alps.

Of the crows it is worthy of observation, that the *corvus graculus* of Linnæus, or *coracias* of Briffon, is faithfully represented by Mr. Pennant, in his British Zoology, under the denomination of the red-legged crow. It is the same bird of which Conrad Gesner * has given a figure, and to which he applies the German appellations, *taba*, *steintaben*, *steinkrae*, and which he justly suspects to be the *cornix cornubia*, or the red-legged crow. The *pyrrhocorax* of Gesner, which

knowledges it is totally unknown to him. All the ornithologists indeed mention this bird as an inhabitant of the Alps, on the authority of Conrad Gesner, who describes it under the name of *corvus sylvaticus*, accompanied with a figure, which has not the least resemblance to a crow, but rather to a curlew; yet Gesner's description of it is much too imperfect to assist us in ascertaining the bird of which he treats.

LETTER 59.

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* *Hist. Av. ed. Frank.* p. 468.

knowledges

knowledges it is totally unknown to him. All the ornithologists indeed mention this bird as an inhabitant of the Alps, on the authority of Conrad Gesner, who describes it under the name of *corvus sylvaticus*, accompanied with a figure, which has not the least resemblance to a crow, but rather to a curlew; yet Gesner's description of it is much too imperfect to assist us in ascertaining the bird of which he treats.

L E T T E R 59.

Mr. Wytttenbach's Collection—Account of the Chain of Hills and Alps seen from the environs of Berne.

THE Reverend Mr. Wytttenbach of Berne, possesses a very curious cabinet, principally relating to the natural history of Switzerland, and to the canton of Berne in particular. It contains specimens of several thousand plants, among which is a large number of the alpine

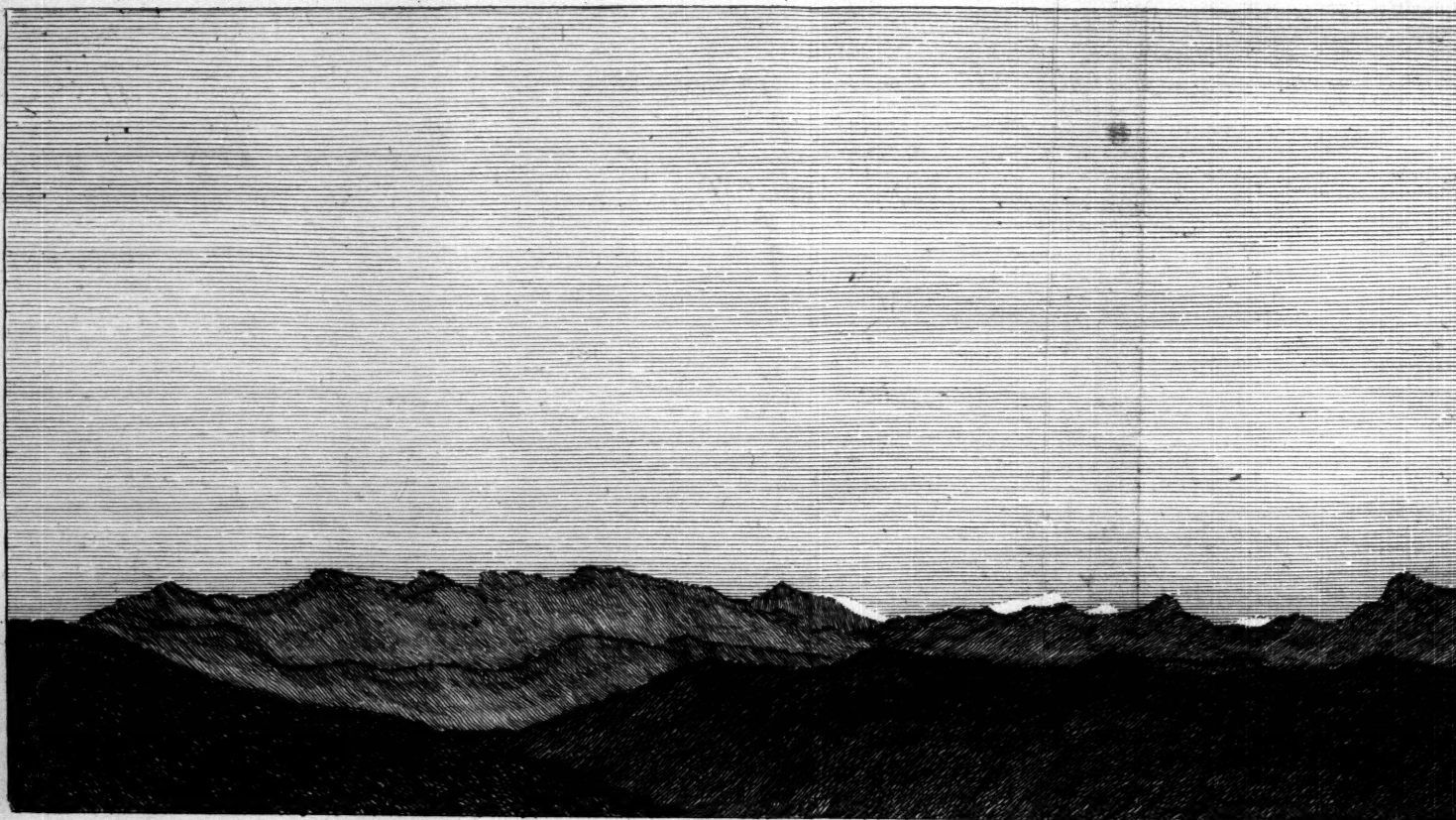
plants of Switzerland; and he has already began to arrange separately the capsules, seeds, and fruits.

It is still more interesting for the great variety of fossils, stones, and petrifications collected by himself in the neighbourhood of Berne, and from the upper and lower Alps.

Mr. Wyttenbach also possesses various shells, insects, and numerous drawings of the glaciers and upper alps, which cannot fail of being highly pleasing to the curious traveller.

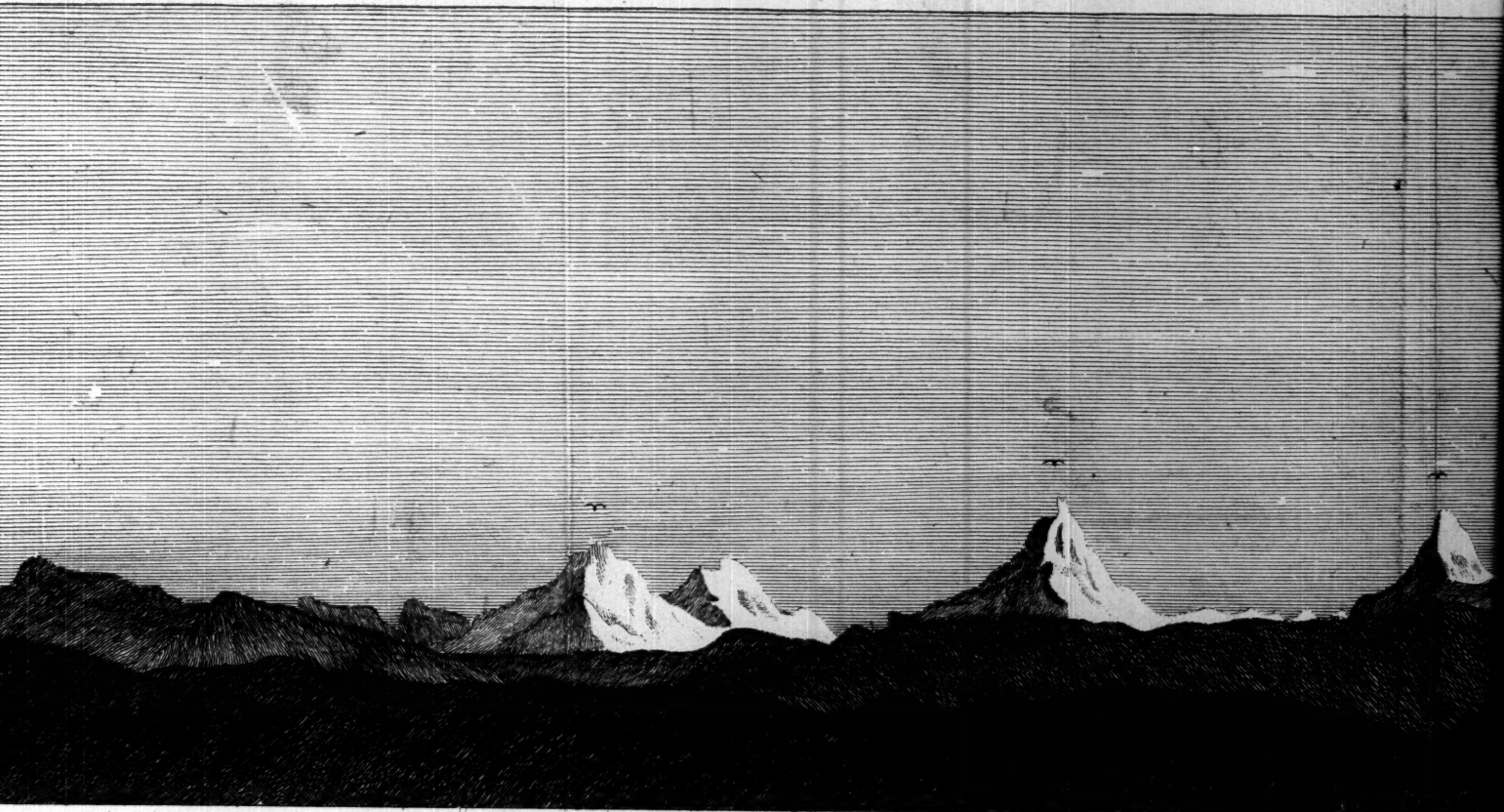
But I was most struck with that part of his cabinet, comprehending those objects of natural history, which in any degree influence agriculture, physic, arts, and trades; and which sufficiently prove the utility of that science in the progress and improvement of human comfort and knowledge. On this subject he has already published a dissertation in the Acts of the Œconomical Society at Berne.

He has not formed this ample collection from mere motives of curiosity, or from desultory views, but with a settled intention to illustrate the natural history of Switzerland in general; to form a topographical and mineralogical description of the canton of Berne in particular; and to elucidate the original formation of mountains, which is the favourite object of his researches, and which
his



* { *Hohgant or Furva*
of the Emmethal

+ { *Scheibach or*
Schreien, above the
frontiers of Endibach



Finster Aar-horn

Schreckhorn

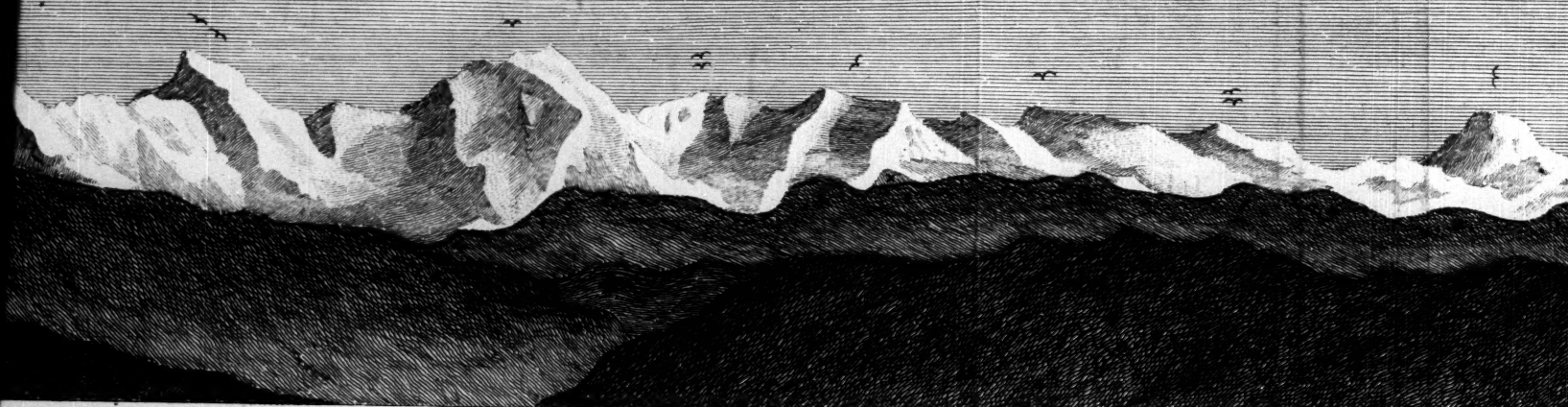
* Rothhorn { between
Grindewald
+ Faulhorn } and the Lake
of Brienz

Wetterhorn

* { Hohen or Furca
of the Emmethal

View of the Alps as

Published according to



Breithorn

x Lauryrathst

+ Kerschthal

x Schildhorn

z Großhorn

Bapfberg

+ Schwabhorn

{ Midday or
Mittagshorn

x Schwartzberg

x Ebenfluh

+ Schindelhorn

{ Gletscher-horn
above Maffstein

* Chain of Lemmigen
Leisinggatal

x Juleck

~ Jungfrau-horn

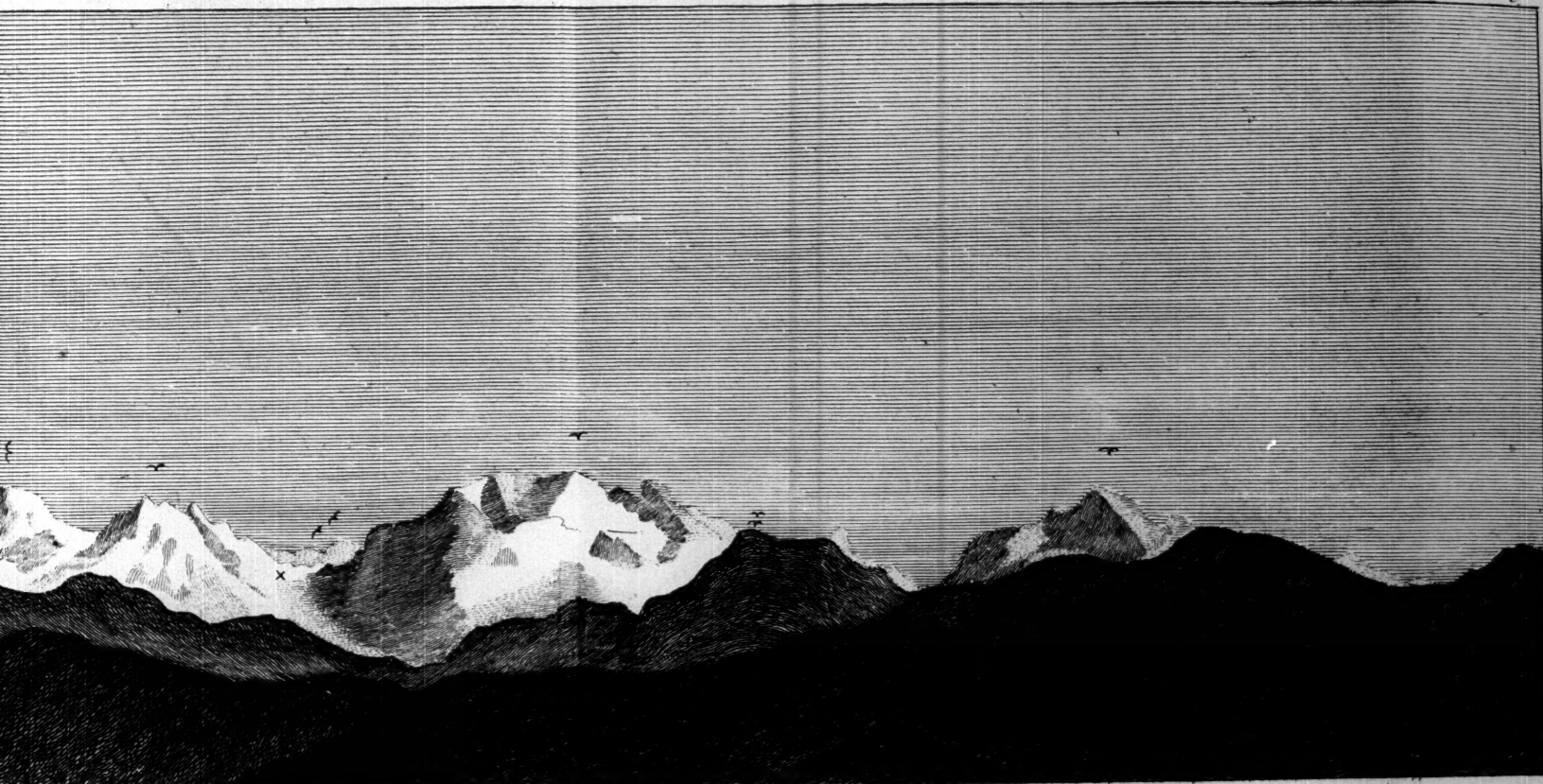
+ Ballenlochst

Interior Eger

x { Mountains of
Simplon

from the Environs of Berne.

Jan. 26. 1799 by T. Castelli. Land



Alpschelenhorn

Leyenbay

Nies

Blumli-alp

Oechenengrat

Mountains of
Lauterbrunnen
Ridge of the
Sammichgletscher

les Dents Rouges
or Buttessen

Drey spitz

Breithorn

his frequent visits to the Alps will assist him in executing with fidelity and accuracy.

At my request, this indefatigable observer favoured me with a plan and description of that range of alps which is seen from Berne, and of the intervening district; an extract from which I now submit to your perusal.

That part of the chain of alps seen from Berne, distinguished by the different names of Wetterhorn, Schreckhorn, Eger, Jungfrauhorn, Lauter-Aar-Horn, Blumlis Alp, &c. is represented on the plan annexed to this letter. You will there observe this immense amphitheatre, gradually rising from the environs of Berne, to those elevated peaks, covered with eternal snow, and hitherto inaccessible.

The plains and hills between Berne and Thun are composed of rounded stones, and argillaceous stones called *molasses*, frequently ranged in alternate strata.

The *molasse* at Gurten, about two miles from Berne, contains, though rarely, *glossopetræ*; and the strata of Belpberg, about seven or eight miles from the capital, are full of different species of *chamites*, *ostracites*, *globosites*, *selenites*, *strombites*, and other similar petrifications.

The ridge of hills which border the high road between Berne and Thun contains, in several

places, and particularly above Mufingen, an extensive stratum of ostracites, some pieces of which weigh more than fifteen pounds each. The situation of the strata in these different hills, their direction, their nature, and the bodies which they enclose, seem to prove, that these hills formed antiently one great plain, which has been since hollowed and divided by the waters, particularly by those of the Aar.

On the slopes and summits of these hills, which in some places are of considerable elevation, are frequently found those large masses of granite, which furnish materials for the public works and buildings of Berne. These masses so nearly resemble the granite of the Grimsel, and of the mountains which compose the great central chain of the alps, as to render it probable, that in the antient revolutions of this globe, they have been brought by the waters to the places where they are at present found, before the deep vallies, which now separate them from their original mountains, existed. The same remark may be as justly applied to the blocks of marble and other calcareous stones, which, though now removed to a considerable distance from their native situation, are also discovered in large quantities upon the hills adjacent to Berne, and which likewise serve for the buildings of that capital.

As

As we approach the town and lake of Thun, the view opens and discovers, towards the south-east, that high calcareous chain, of which the Stockhorn, the Neunerren, and the Ganterish have been illustrated by the botanical labours of the celebrated Haller. This chain, which joins that of Schwartzzenburgh towards the canton of Friburgh, is chiefly calcareous, and contains fewer petrifications than the above-mentioned hills: it is not of sufficient elevation to be covered with snow in summer.

The Niefs, which is the last mountain in this calcareous chain, stands on the borders of the lake; and separates the valley of Frutigen from that of Simme. It is peculiarly interesting to travellers, on account of the fine view from its summit; and to naturalists, because it joins to the alps. Towards its foot beds of slate have been discovered; higher up it is of calcareous stone; and near its top is found a species of pudding-stone, filled with small fragments of broken petrifications.

In traversing the lake of Thun, its borders, which are planted with vines, are composed of rounded stones, united by a calcareous cement, as far as the mountains of St. Beat. There, near Rallingen, the rocks are calcareous and rugged,

containing, in a few places, broken petrifications, of which it is often difficult to ascertain the species. On continuing my route at the foot of the St. Beat, I observed the first rocks, that are absolutely perpendicular, and even impending, and which are marked at different elevations with furrows, occasioned by the waters of the lake, that, in former periods, was probably several hundred feet above its present level. I remarked the same furrows nearly at the same elevations, in the vallies of Lauterbrunnen and Hasli, which coincidence seems to prove, that the lake of Thun once extended over all these parts, covered the whole plain of Berne, and reached as high as the Lengenbergl, where Gruner seems to have discovered those petrifications called Pholades.

Having traversed the lake of Thun, I entered the narrow but agreeable valley of Unterseen and Interlachen, on each side of which the mountains approach each other, and form, if I may so express myself, the *vestibule* of the alps. This valley, separating the lakes of Thun and Brienz, which appear to have been once united, is entirely formed by the stones which torrents have brought from the alps.

On the right is Abendberg covered with trees
and

and herbage, and stretching towards a group of mountains of considerable extent; yet little known, though their tops may be seen at Berne.

The Ballenhoechst, Sulek, Schnabelhorn, Schwartzberg, Schwalmern, Schilthorn, Kirchfluh, Latreyenfirst, and Dreyspitz, are the most remarkable mountains in this group, which on one side borders the valley of Lauterbrunnen, and on the other towers opposite to the Niefs, at the commencement of the valley of Frutigen. It is united by means of the *sefinen alps* with the Dents Rouges, and the great central chain of granitical mountains. The mountains of this group stand on a base of argillaceous schistus, containing a few petrifications, which is rarely visible but at certain elevations. Towards Lauterbrunnen, particularly, a fine-grained calcareous stone abounds.

To return to the valley of Unterseen. On the left is another group of calcareous mountains, which extend along the lake of Brienz towards Hasli, and stand also on an argillaceous schistus, which is but rarely visible. And though the granitical chain is at a very small distance, it is, however, so entirely concealed by these secondary mountains, as to be no where discovered, except between Unterseen and Interlachen,

where the Jungfrau presents herself in all her majesty.

From these delightful plains I attempted to penetrate towards the granitical chain of alps, through narrow vallies enclosed between perpendicular rocks of an enormous height; but every where I met with secondary mountains, which, to a considerable height, conceal the primitive bed of granite, and render the approach to it extremely dangerous, if not impracticable. Thus the valley of Lauterbrunnen is bordered by calcareous rocks even to its farther extremity. At Sichelaluenen the first masses of granite appear, forming the base of the calcareous rocks, which are of a very great height. As I continued my route towards the chain, which stretches from the Jungfrau to the Grofshorn and Breithorn, I observed a rock of steatite, in which some veins of lead have been discovered and worked at Hohalp. Higher up is the true granitical chain, which, however, even there is frequently covered with calcareous peaks.

I found the approach to this chain less difficult at Wengenalp, the last of a group of calcareous and schistous mountains between Lauterbrunnen and Grindelwald, which there joins the Jungfrau, the summits whereof appear to be
of

of granite. In the valley of Grindelwald I observed only the argillaceous schistus and calcareous stone: the external parts of the top of the Eger, of the Mettenberg, and of the Wetterhorn, are calcareous, and cover the granite of the central chain; and the only pieces of granite are the fragments, which are brought into the valley by the two glaciers. That chain, which is opposite to these glaciers, and borders the northern side of the valley of Grindelwald, has an argillaceous base, which, in several places, particularly towards Hasli, contains cornua ammones: this base is also covered with calcareous rocks, through which it often penetrates at different heights.

I will now take a nearer view of the primitive chain, and trace the alps in the same order as they are marked upon the annexed plan. I shall consider the Jungfrau as the center, from which I will take my departure on one side towards the Gemmi, and on the other towards the Schreckhorn, Wetterhorn, and Grimsel.

The Jungfrau, or Virgin, is one of the highest and most beautiful mountains in the canton of Berne. The granite does not appear till a very considerable elevation; its foot being in most parts covered by rocks, which are of calcareous stone, called by the natives *Staldenflub*, of which an elevated peak is denominated the Monk.

On

On following these rocks to Sichelauinen, about two leagues from Lauterbrunnen, I observed a red stratum, that seems to form the separation between the granite and the calcareous substance: it is composed of an argillaceous slate of red colour, spotted with brown and green, and of a fine-grained iron ore (as I was surprised to find) containing anomites. I observed the same stratum at the bottom of the Eger and Wetterhorn, and of several mountains towards Hasli: I remarked it at different heights; but as all access to them has been hitherto found impracticable, I cannot attempt to explain a phenomenon, which merits a nearer investigation.

The chain of the Jungfrau stretches to the right by those inaccessible peaks called the Gletscherhorn, Ebenfluh, Mittaghorn, Grosshorn, Breithorn. I am entirely unacquainted with their structure, except from the fragments, which I have observed at their feet, or on the masses of ice descending from their tops. Limestone occurs at very considerable heights; particularly white marble, and a fine grey marble, which is the matrix of a red hematite filled with innumerable small chrystals of iron of an octagon figure, and attractable by the magnet.

Besides these stones, I noticed on the glaciers of Breitlauinen and Breithorn, various species of
granite,

granite, both foliated and in blocks, of iron-stone, of *saxum fornacum*, or *stelsstein*, and of argillaceous and micaceous schistus. All these fragments sufficiently prove, that granite prevails in the higher parts, although it is frequently covered with secondary mountains.

To the right is the majestic Blumlis alp, which is a fine object from the plains: a large glacier, mentioned by no author, stretches at its feet. I first noticed it from the opposite heights of Oeschenengrat, and at the same time observed, that the feet of the Alpschelenhorn and Blumlis alp are covered with black schistus, and that the granite is not apparent, but at a great height.

A few days after this expedition, I mounted to the summit of the glacier, called by the peasants Gamchigletscher, where it forms a very steep ridge towards the valley of Lauterbrunnen. From thence I beheld the vast amphitheatre of the Lauterbrunnen glaciers: I remarked also, that the valley of Lauterbrunnen ends at this place; that it has only one issue behind Blumlis alp, where a large glacier, with a plain and unbroken surface, stretches towards the valley of Gaster. Here then is the extremity of the valley of Lauterbrunnen, which expands at the feet of the Eger and the Jungfrau, continues

tinues almost in a strait line as far as Sichel-
lauinen to the foot of the Gletcher-horn and of
the glacier of Stufstein, where it forms an an-
gle, and bends towards Blumlis alp.

The ridge of the glacier of Gamchi is of a
black calcareous stone, which, in many places, is
of a fine texture, and splits into lamina of a
rhomboidal form; in other parts it is coarsely
granulated, containing white and black spar.

The sides of the Blumlis alp, that border the
glacier, are black slate, in which I found several
balemnites, and a fragment of a cornu ammonis
a foot in diameter. The pieces of granite which
are discovered upon the glacier, and which most
probably fell from the summits of the Blumlis
alp and of the Dents Rouges, is very similar
to that granite, in which the veins of lead are
traced near Sichelauinen in the valley of Lau-
terbrunnen.

The granitical chain, which extends on the
right by the Alpschelenhorn and the Altits, is
entirely concealed and lost in Mount Gemmi,
where only calcareous stone and slate are dis-
covered. As I have not yet had any opportu-
nity to examine the mountains of Simmenthal
and of Gessenay, I cannot inform you, if the
granite appears through their calcareous cover-
ing.

But

But let us return to the Jungfrau, and trace the mountains towards Grindelwald and the Grimsel. The two high pyramids which tower near the Jungfrau are the two Egers, called from their position Exterior and Interior. Calcareous stone is visible to a great height. Many persons indeed pretend, that the whole side of the Exterior Eger towards Grindelwald is entirely calcareous; but I am convinced, from repeated observations, that the substance of these mountains is granite, though it is covered with calcareous stone lying on reddish slate, which in many places forms a species of breccia, composed of an argillaceous base, covered with calcareous fragments. You observe behind the Exterior Eger two small peaks, which seem united by a ridge: these are the Viescherhorn and the Zefenberg, which overlook the inferior glacier of Grindelwald. The stones that have fallen on the glacier show, that their summits, as well as that of the Schreckhorn, are of granite in blocks, veined granite, and other lamellated rocks, which frequently contain green steatites, amianthus, and crystals of quartz.

The high peak, which appears to stand near the Zefenberg, is at a very considerable distance, and probably separated from it by large vallies of ice. This peak, that has hitherto escaped

caped the mention of travellers, seems to be the Finster-Aar-horn, which can only be approached from the Grimsel; and by traversing the glacier of the Aar. I have seen it from the summits of the St. Gothard, from one of the heights which separate the valley of Grindelwald from the lake of Brienz; I have been at its foot upon the glacier of the Finster-aar; and on all sides, and in all places, its elevation is stupendous, and appears to me to exceed even that of the Schreckhorn, which has been hitherto considered as the highest.

The Schreckhorn, or peak of terror, rises between the two glaciers of Grindelwald. Concealed by its base, the Mettenberg, it is not seen from the valley of Grindelwald; and the rugged paths which lead across the superior glacier to its foot, are extremely difficult and dangerous. Part of it is observed from that glacier. The tops of the Mettenberg are of granite, and its lower parts of lamellated rock, blended with mica and quartz. The piked summits of the Schreckhorn, which rise to an enormous height, appear to be of pure granite and other primitive stones.

The next in this chain, is the Wetterhorn, or Stormy Peak, whose perpendicular sides border the superior glacier. The exterior part of this
mountain

mountain is of calcareous stone to a very considerable elevation, but its summits are undoubtedly a primitive rock. I noticed along its sides the same red stratum, which makes its appearance on the Eger and at the foot of the Jungfrau.

Behind the Wetterhorn is seen an elevated rock, which is said by the inhabitants of Grindelwald to border the glacier of the Lauter-aar, and which from thence has been ascended by several *chasseurs*.

On examining the stones which have been brought down by the superior glacier, I did not discover much granite in mass, but often veined granite, and lamellated rock, which frequently enclose pieces of the corneus spathofus mixed with steatites, pyrites, and quartz.

The foot of the Wetterhorn and that of the Mettenberg contain, in several places, a fine species of white marble, with red, green, and yellow veins: a quarry of which, now covered by the inferior glacier, was formerly worked.

In passing from Grindelwald to Meyringen, I traversed the Scheidek, which entirely consists of black slate, that stands on the foot of the Wetterhorn. This slate continues to compose the chain, that divides Grindelwald from the plains of Hasli and the lake of Brientz.

As I descended the Scheidek, I observed, on my right hand, the chain that joins the Wetterhorn and runs towards the Grimsel. As I have not particularly examined this chain, I shall only remark in general, that from an investigation of the stones and fragments which strew the vallies and sides of the hills, it appears to contain the same species of marble which I found on the superior glacier of Grindelwald, also red slate, argillaceous brescia, and various granites. But thus much is certain, that the front of these mountains is entirely concealed by secondary substances; and that the true region of granite was not apparent, until I had passed Meyringen and ascended the Grimsel, during the greatest part of which ascent I only noticed lamellated rocks and granite. All the mountains which form the Grimsel and the neighbouring chain, are concealed in my plan by the Wetterhorn; they extend behind the Schreckhorn as far as the Finster-aar-horn. This is the true region of granite and other primitive rocks, the heart of the central chain, and the great observatory of the naturalist.

L E T T E R

L E T T E R 60.

*Excursion to Thun, Worbe, and Hindelbank.—
Tomb of Madame Langhans.*

THE environs of Berne are in general extremely delightful, and there is no road which exhibits a more pleasing variety of hill and dale than that which leads to Thun. It runs through an agreeable country; winds through fertile meadows, enriched with dark forests of pine and fir, and occasional groves of beech and oak. The cattle, lately descended from the Alps, were browsing on the pastures, and added to the animation of the scenery. The well-being of the inhabitants is visible from the cultivation of the grounds, and the number and neatness of the cottages and farm-houses which are scattered about the fields, skirted by trees, or half concealed amid tufts of wood.

Thun is distant about twelve miles from Berne: it occupies the bottom and the brow of a hill, and stands on both sides of the Aar. It contains twelve hundred souls; enjoys consider-

able immunities; has its own magistrates and courts of justice, in which the bailif from Berne always presides, and from whose decision an appeal lies to the capital. The inhabitants employ themselves in carding and spinning filk for the manufactures of Basle. Some of the burghers possess large herds of cattle.

To the north-east stands, on an eminence, the church and the castle, which is the residence of the bailif, and occupies the highest point. From its windows I enjoyed a most pleasing and extensive view, not inferior in its kind to any prospect in Switzerland. Underneath is the town, occupying both sides of the Aar, standing in a rich plain of pasture, and bounded by a chain of hills, black with forests of fir, which extend from Berne and join the Niefs, a brown and rugged mountain, that rises rapidly from the edge of the lake. To the east, a small ridge covered with vines and trees; and to the south-east, part of the lake of Thun, bounded by hills rising to the mountains and alps of Lauterbrunnen and Grindelwald, "*piled up to the clouds.*"

The Aar flows from the lake between two level promontories, prettily sprinkled with trees, on one of which stands the castle of Schadan. The lower parts of this view, contrasted with the rugged rocks and mountains, resemble a

painting of Claude by the side of a Salvator Rosa.

From Thun I returned about six miles to the village of Maffic, where I quitted the high road and passed through pleasant thickets of beech and oaks, over fields and enclosures; the cottages and hamlets agreeably situated in lawns, and amid clumps of trees.

In about an hour and a half I entered the road which leads from Berne to Langenau, and ascended to the upper part of the village of Worbe, where I passed a most agreeable day with an amiable family, who favoured me with a most cordial and polite reception. The view from their house, which stands in the midst of a field, is not inferior to that from the castle of Thun: it commands a rich enclosed and well-wooded country, gently broken into hill and dale, and watered by many lively streams; the huge white peaks of the Jungfrauhorn, Schreckhorn, and Wetterhorn, overtopping a hill embrowned with firs.

I made also an excursion to Hindelbank, a village about four miles from Berne, in order to examine the tomb of Madame Langhans, a most celebrated work of Nahl, a Saxon sculptor. Being employed in constructing a sepulchre for Count d'Erlach, he was lodged in the house of

the clergyman, his particular friend, whose wife, a woman of uncommon beauty, expired in child-bed on Easter-eve. Struck with the time of her death, animated by the recollection of her beauty, sympathising with the affliction of her husband, he conceived and finished this affecting monument. It is placed in the body of the church, sunk into the pavement like a grave, and covered with two folding-doors. When these are opened, a grave-stone appears as if just rent into three fractures, through which is half discovered the figure of a woman slightly veiled with a shroud. She is represented at the moment of the resurrection, when "*the graves are commanded to yield up their dead.*" With her right hand she is gently raising that portion of the broken grave-stone which lies over her head; and in the other holds a naked infant struggling with its little hands to release itself from the tomb. "*Here am I, Lord, and the child whom thou gavest me **," are the sublime words which form the inscription. Below is the name of the deceased, "Anna Magdalena Langhans, wife of the clergyman. Born 1723; died 1751." The workmanship is by no means inferior to the original design. The artist has

* Hier Herr bin ich; und das kind, so du mir gegeben hast.—An engraving of this monument is published by M. de Mechel of Basse.

formed the whole sepulchre out of one block, and so naturally expressed the swelling of the stone, that the fragments seem as if they had just burst, and were in the act of opening. The only circumstance to be regretted is, that the materials are not so durable as such a monument deserves; being of sand-stone, they are too soft to resist the effects of time, and even now exhibit some symptoms of decay.

Nothing perhaps can more strongly display the superior effect of simplicity over magnificence, than the comparison of this tomb with the mausoleum of Count d'Erlach in the same church. The latter consisting of several marble figures, executed in a masterly stile, and loaded with all the emblems of rank and opulence, scarcely attracts a momentary attention; while this simple grave-stone "*speaks home*" to the heart of every person of taste and feeling.

L E T T E R 61.

*Visit to Michael Schuppach, the Physician of
Langenau.*

Langenau, Sept. 18.

YOU have heard, perhaps, of Michael Schuppach, the famous Swiss doctor; of whose sagacity in discovering the seat of disorders, and applying suitable remedies to them, many wonderful stories are recounted by travellers; and which, like Virgil's Progress of Fame, have increased in the marvellous in proportion as they receded from the scene of action. I am now lodged in the house of this celebrated *Æsculapius*: it is situated above the village of Langenau, on the side of a steep acclivity; from which circumstance he is generally styled *the physician of the mountain*.

Upon our arrival we found the doctor in his apartment, surrounded by several peasants, who were consulting him upon their respective complaints; each having brought with him a small bottle, containing some of his water: for, by inspecting

ing the urine, this medical sage pretends to judge of the state of the patient. His figure is extremely corpulent; he has a penetrating eye; and a good-humoured countenance. He is seated opposite to the person who consults him, one moment looks at the water, the next at the patient; and continues examining alternately the one and the other for some time, occasionally whistling during the intervals. He then opens the state of the case, acquaints the consultant with the nature of his complaints, and has sometimes the good fortune to hit upon the true cause. In a word, his knack of discovering disorders by urine, has gained such implicit faith in his skill, that we might as well question the Pope's infallibility before a zealous catholic, as the doctor's in the presence of his patients. He has certainly performed several great cures; and the rumour of them hath brought persons from all quarters of Europe, who are come hither for his advice.

The doctor was formerly a village surgeon, has a slight knowledge of anatomy, and is tolerably versed in botany and chemistry. His acquaintance with the theory of physic is said to be inconsiderable: the greatest part of his knowledge being derived from his extensive practice, notwithstanding he never stirs a quarter of a mile from his own house; for he would not take the

trouble of going to Berne, even to attend the king of France.

It is more than probable, that much of this extraordinary man's success, is owing to the great faith of his patients; to the benefit they receive from change of climate; to the salubrious air of this place; and to the amusement arising from the constant succession of different company. But whatever may have been the causes of his celebrity, it has come to him, as all accounts agree, unsought for by himself. He has certainly many excellent qualities: humane and charitable to the highest degree, he not only furnishes the indigent peasants who consult him, with medicines gratis, but generally makes them a present in money besides; and he always appropriates a certain portion of his gains to the poor of his parish. His wife and grand-daughters are dressed like the peasant women of the country; and he has shewn his good sense in giving to the latter a plain education: the eldest he bestowed in marriage, when she was but fifteen, upon one of his assistants, and with her £. 1,300; no inconsiderable portion for this country. He procured a match for her so early, he said, to prevent her being spoiled by the young gentlemen telling her that she was pretty, and inspiring her with the ambition of marrying above her rank.

If

If domestic harmony, and the most perfect simplicity of manners, have any pretensions to please, you would be highly delighted with this rural family. The wife is a notable active woman, and superintends the household affairs with remarkable cleverness: she assists her husband likewise in preparing his medicines; and, as he talks no other language than the German, she serves occasionally as his interpreter. And, as a proof of his confidence in her administration of his affairs, she acts also as his treasurer, and receives all his fees; which, in the course of a year, amount to a considerable sum: for, although he never demands more than the price of his medicines, yet no gentleman consults him without giving an additional gratuity. She has likewise received many presents from persons who have reaped benefit by her husband's prescriptions: several of these consist of valuable trinkets, with which on days of ceremony she decks herself to the best advantage, in the simple dress of the country.

The family sit down to table regularly at twelve o'clock: there are always some strangers of the party, consisting not only of those persons who are under the doctor's care, but of travellers, like ourselves, who are led by motives of mere curiosity. When the weather is fine, and their guests more numerous than usual, dinner is
served

served in an open shed, that overlooks the adjacent country, with a distant view of the glaciers beyond the lake of Thun. Yesterday some peasants, whom the doctor had invited, formed part of our company; after dinner, he gave some money to those that sat near him, and ordered one of his grand-daughters to distribute his bounty to the others. The benevolence of the old man, his gaiety and good-humour, the cheerfulness of his family, the gratitude of the poor peasants, the beauty of the prospect, and the fineness of the weather, formed all together a most agreeable and delightful scene; and I do not remember to have ever partaken of any meal with a more sensible and heart-felt satisfaction.

This singular man is very often employed in giving advice from eight in the morning till six in the evening, with no other intermission than during the time he is at table. His drugs are of the best kind; for he collects the simples, and distills them himself. His house, like those of the peasants, is constructed of wood; and, though always full of people, is remarkably neat and clean. In short, every thing about him bears the appearance of the pleasing simplicity of former ages.

I had almost forgotten to tell you, that I consulted him this morning; and have reason to be
highly

highly satisfied with his prescription: for, he told me I was in such good health, that the only advice he had to give me, was “to eat and drink well, to dance, be merry, and take moderate exercise.”

It is now Langenau fair; and the village is crowded with the neighbouring peasants. Great numbers of the men have long beards, and many of them cover their heads with a woman's straw hat, extremely broad, which makes a very grotesque appearance: their dress is chiefly a coarse brown cloth jacket without sleeves; with large-puffed breeches of ticking. The women, who are remarkably handsome, wear their hair plaited behind in tresses, with the riband hanging down below the waist; a flat plain straw hat, which is very becoming; a red or brown cloth jacket without sleeves; a black or blue petticoat bordered with red, and scarcely reaching below the knees; red stockings with black clocks, and no heels to their shoes; their shifts of extremely fine linen, fastened close round the throat by a black collar with red ornaments: the better sort have chains of silver between the shoulders, brought round under each arm, and fastened beneath the bosom, the ends hanging down with some silver ornaments.

I am

I am so charmed with the situation of this village, the cheerfulness and singularity of this rustic and agreeable family, and the uncommon character of the humane doctor, that I could with pleasure continue here some days longer: but I am pressed for time, and have a long journey before me.

P O S T S C R I P T.

THIS celebrated empiric died in March 1781; and Langenau, which I again visited in August 1785, was no longer the resort of the sick, the valetudinarian, the curious, and the idle. The doctor had gained by his practice £. 10,000; of which sum his wife received a third, and the remainder was distributed among his son-in-law and grand-children.

Langenau is situated at the commencement of the Emmethal, a valley remarkable for its cultivation and beauty. Many of the farmers are extremely rich: the people appear in general contented and happy; the wooden cottages scattered about the fields, are uncommonly neat and comfortable; and announce, in their general appearance, the well-being of the peasantry.

LETTER

L E T T E R 62.

Payerne—Moudon—Geneva—Calvin.

Geneva, Sept. 6.

I TOOK leave of my friends at Langenau, in order to proceed to Avignon; where I am going to pay a visit to the *Abbé de Sade*, author of the interesting memoirs of the life of Petrarch. Monsieur de Vigur, a senator of Soleure, offered me a place in his carriage to Berne: and, as my principal object in travelling is to acquire intelligence, I very gladly embraced this opportunity of leading my worthy and well-informed companion into a conversation, not only concerning the government of Soleure in particular, but in relation also to Switzerland in general; and I found him exceedingly well-disposed to answer the several questions he allowed me to propose to him.

The next day I repassed through Morat and Avenches, and slept at Payerne, a town in the canton of Berne, which enjoys considerable privileges. Upon the bridge over the Broye, is an antient Roman inscription: as I was endeavour-
ing

ing to decypher it, a plain-looking man accosted me in a very solemn tone of voice, and said, he had often tried to make out the inscription, but without success; though he could read very well, and had a smattering in Latin. "For," added he, "what can be the meaning of N and I and O, and all those great letters, which seem to have no connection with each other? Give me a page of plain Latin, and I will translate it from the beginning to the end; but for these Ns, Is and Os; take my word for it, notwithstanding all your pains, you will never be the wiser." However, as I did not seem disposed to follow his advice, but continued decyphering the inscription (which was by no means a difficult task) he appeared astonished at my obstinacy, and left me, with an apparent air of pity, to my hopeless fortune.

Moudon is an handsome town, the principal burgh of a bailliage of the same name, and formerly the capital of all that part of the Pays de Vaud, which belonged to the duke of Savoy. It was also the ordinary residence of his chief bailif, and the place where the assembly of the states were accustomed to meet. The bailif appointed by the sovereign council of Berne, resides in the castle of Lucens, built upon the summit of a mountain, in a situation exceedingly picturesque.

picturesque. This castle formerly belonged to the bishops of Lausanne, and was one of their favourite seats, before the reformation was introduced into this country.

Geneva lies upon the narrowest part of the lake, where the Rhone issues in two large and rapid streams, which soon afterwards unite. That river separates the town into two unequal divisions; receives the muddy Arve in its course; and flows through France into the Mediterranean. The adjacent country is uncommonly picturesque; and abounds in magnificent views: the several objects which compose this enchanting prospect, are, the town; the lake; the numerous hills and mountains, particularly the Saleve and the Mole, rising suddenly from the plain in a variety of fantastic forms, backed by the glaciers of Savoy, with their frozen tops glistening in the sun; and the majestic Mont Blanc rearing its head far above the rest.

Geneva, which lies partly in the plain upon the borders of the lake, and partly upon a gentle ascent, is irregularly built; the houses are high, and many, which stand in the trading part of the city, have arcades of wood, which are raised even to the upper stories. These arcades, supported by pillars, give a gloomy appearance to the street; but are useful to the inhabitants in protecting

protecting them from the sun and rain. Geneva is by far the most populous town in Switzerland; and contains 24,000 souls. This superiority of numbers is undoubtedly owing to the great industry and activity of the inhabitants; to its more extensive commerce; to the facility of purchasing the burghership; and to the privileges which government allows to all foreigners. The members of this city are distinguished into citizens and burghesses, inhabitants and natives *. The citizens and burghesses are alone admitted to a share in the government: the inhabitants are strangers who are allowed to settle in the town with certain privileges; and the natives are the sons of those inhabitants, who possess additional advantages. The two last classes form a large majority of the people.

The liberal policy of this government, in receiving strangers and conferring the burghership, is the more remarkable as it is contrary to the spirit and usage of the Swiss. It is here, indeed, more necessary; the territory of this state being so exceedingly small, that its very existence depends upon the number and industry of

* Since the late revolution in 1782, there is a fifth class, called *domiciliés*, who receive from the magistrates an annual permission to remain in the city.

the people : for, exclusive of the city, there are scarcely 16,000 souls in the whole district of the Genevois.

The reformed doctrines first preached at Geneva in 1533, by William Farel, a native of Gap in Dauphiné, and Peter Viret of Orbe, owed their final reception and establishment to John Calvin. That reformer was born at Noyon, in 1509, and being driven from France by the persecutions which Francis the First had raised against the protestants, made his first appearance in this city in 1536.

Notwithstanding Zuingle, Œcolampadius, and Haller, had reformed the greatest part of Switzerland, some years before that period ; yet Calvin, as Voltaire justly observes, has given his name to the sectaries of the reformed religion, in the same manner as the new continent took its appellation from Americus Vespufius, although the original discovery was made by Columbus. And although Calvin was not the first reformer of Geneva ; yet, as he gave additional strength and solidity to the new establishment, and founded the ecclesiastical form of government, he totally eclipsed the fame of his friend William Farel, who scattered the first seeds of reformation, which the other brought to maturity. In

truth, so great was the ascendancy which Calvin, although a foreigner, acquired over the citizens, that he possessed considerable influence even in civil matters; and bore a large share in settling the political constitution. Conscious that religion derives support from every branch of knowledge, he liberally promoted the cultivation of science, and the study of elegant literature. To this end, as well as to encourage theological erudition, he prevailed upon government to establish a public academy: but with singular disinterestedness declining the proposal of being appointed perpetual president, he obtained that office for his friend and fellow-labourer, Theodore Beza. In this new seminary, Calvin, with Theodore Beza, and his other colleagues, eminent for their superior knowledge, read lectures, with such uncommon reputation and success, as attracted students from all quarters.

There is such a striking splendour in the brighter parts of this disinterested and celebrated reformer's character, as to render us, at first glance, almost insensible to those dark spots which in some instances have obscured its glory. But when we reflect on his asperity and arrogance; and, above all,

all, on the cruel persecution of Servetus ; we cannot but lament that he did not rise superior to the intolerant principles of the age, which in all other instances he helped to enlighten. With regard, however, to his intolerant principles, it must be acknowledged, that the same uncharitable spirit prevailed also among many of the most celebrated reformers ; who unaccountably conceived, in opposition, not only to the genius, but to the clearest precepts of the gospel, that persecution for conscience sake, although unchristian in every other ecclesiastical establishment, was justifiable in their own. This absurd and dangerous opinion, gave great advantage to their adversaries of the papal hierarchy : for, it is obvious to the meanest understanding, that, if persecution is justifiable in any particular church, it must be so universally.

The republic of Geneva is, however, at present, the most tolerating of all the reformed states in Switzerland ; being the only government in this country, which permits the public exercise of the Lutheran religion. In this respect the clergy, no less wisely, than suitably to the spirit as well as the letter of the Christian

revelation, have renounced the principles of their great patriarch, Calvin: although they still hold that able reformer in high veneration; yet they know how to distinguish his virtues from his defects, and to admire the one without being blindly partial to the other.

I am, &c.

L E T T E R 63.

On the Literature of Geneva.

TO a man of letters Geneva is particularly interesting: learning is divested of pedantry, and philosophy united with a knowledge of the world. The pleasures of society are mixed with the pursuits of literature; and elegance and urbanity give a zest to the profoundest disquisitions. Nor are letters confined in this city merely to those who engage in them as a profession, or to those whose fortune and leisure enable them to follow where genius leads.

Even

Even the lower class of people are exceedingly well informed; and there is perhaps no city in Europe, where learning is more universally diffused. I received great satisfaction in conversing even with several tradesmen upon topics both of literature and politics; and was astonished to find, in this class of men, so uncommon a share of knowledge. But the wonder ceases, when we are told, that all of them were educated at the public academy, where the children of the citizens are taught, under the inspection of the magistrates, and at the expence of government.

One circumstance in this seminary particularly contributes to excite the industry and emulation of the students: prizes are annually distributed to those, who have distinguished themselves in each class. These rewards consisting of small medals, are conferred with such solemnity, as cannot fail of producing great effect. A yearly meeting of all the magistrates, professors, and principal inhabitants, is held at the cathedral, when the first syndic himself distributes, in the most public manner, the honorary retributions. I met this morning one of the scholars, and, seeing his medal, inquired its meaning? "*Je la porte,*" replied the boy,

scarcely eight years old, "*parce que j'ai fait mon devoir.*" I required no stronger proof to convince me of the beneficial influence upon young minds, from these encouraging and judicious distinctions, than appeared from this sprightly specimen.

The citizens enjoy the advantage also of having free access to the public library; and by this privilege, they not only retain but improve that general tincture of learning which they imbibe in their early youth.

The public library owes its origin to Bonniard, prior of St. Victor, who was twice * imprisoned for having asserted, against the dukes of Savoy, the independence of Geneva; and who considered the hardships he had suffered, and the perils he had escaped, as ties that endeared him more strongly to a city, which he had adopted as his own. He was a principal promoter of the reformation by gentle means and gradual instruction. He closed his benefactions to his beloved city by the gift of his valuable manuscripts and books, and by bequeathing his fortune towards the establishment and support of the seminary. His works, which chiefly relate to the history of Geneva, are preserved with that

* See p. 81.

care and reverence, which are due to so eminent a benefactor.

The library contains 25,000 volumes and many curious manuscripts, of which an accurate and learned catalogue has been lately published by the Rev. Mr. Sennebier the librarian. He has attempted to determine the ages of the several manuscripts; he describes their form and size, the materials on which they are written, the ornaments, the characteristic phrases, and mentions the proofs on which he grounds his opinions. He adds also the notes, and distinguishes those which have never been printed.

M. Sennebier has also favoured the world with "*Histoire Literaire de Geneve*," accompanied with biographical anecdotes of those natives, who have been celebrated for their learning. As I should trespass too much upon your time, if I were to attempt sending you an account of the principal men of letters in Geneva, I shall confine myself to those only, with whom I am personally acquainted.

Charles Bonnet was born in 1720. His life has been devoted to the pursuits of literature, and to the improvement of philosophy and science. He has proved by his publications, that his indefatigable industry in searching into the phenomena of the creation, is equalled only by

his ingenuity in explaining them. His works, printed at Neuchatel, form nine volumes in quarto, or eighteen in octavo, and contain divers subjects of natural history, many accurate observations on insects, on the vegetation of plants, on the use of leaves in plants, considerations on organized bodies, and the contemplations of nature.

By several treatises, and particularly his Analytical Essay on the Faculties of the Soul, he has shewn himself an acute metaphysician. Like his friend Haller, he has also stood forth an able advocate for the great principles of natural and revealed religion. His *Philosophical Researches on Christianity, and his treatise on the Existence of God, prove, that an intimate knowledge of nature necessarily tends to establish a rational belief of those great truths.

I had frequent opportunities of conversing with this respectable philosopher: though now in the sixty-sixth year of his age, he possesses an uncommon degree of vivacity and animation, still retains his enthusiasm for the pursuits of

* A translation of his *Recherches Philosophiques sur les Preuves du Christianisme*, has been lately given to the public, by John Lewis Boissier, Esq. under the title of "Philosophical and Critical Inquiries concerning Christianity."

science, and speaks with the same perspicuity and elegance as are observable in his writings.

I was no less ambitious of being known to his nephew M. de Saussure. Born in 1740; he was elected professor of philosophy in 1762; and has given to the public the following specimens of his indefatigable industry, and of the versatility of his talents: various remarks and experiments on microscopic animals; observations on electricity; on basaltic lavas and volcanic productions; on the physical geography of Italy. He has invented an instrument for measuring the degrees of magnetic force; and so much improved the electrometer of Cavallo, that it may be almost considered as a new instrument. But above all, his invention of the hair-hygrometer, or an instrument for measuring the moisture of the atmosphere, has enabled him to make many theoretical and experimental researches that are detailed in his *Essai sur l'Hygrometre*. And although a controversy is now subsisting between him and M. de Luc, concerning the propriety of hair as an instrument for this purpose; yet it cannot depreciate this invention; and new lights must be thrown on that subject by the opposition of two such able naturalists.

His *Voyages dans les Alpes*, of which two volumes in quarto have already made their appearance,

pearance, treat of the physical geography of the alps, the formation of mountains, the origin of the glaciers, and various phænomena of nature, which peculiarly distinguish Switzerland. Unlike some philosophers of the present age, who from their cabinet, and with no other knowledge of the earth than what is acquired by books, peremptorily and presumptuously decide on the theory of the globe, this indefatigable observer draws from repeated travels, and incessant experience, a fund of facts, which may enable him to complete the great design and object of all his researches, that of establishing a more perfect theory of the earth.

The cabinet of M. de Saussure is an object worthy of the traveller's curiosity. It contains a collection of foreign and Swiss butterflies; various petrifications and fossils, more particularly a large variety of basalts and volcanic productions; numerous specimens of granites and other primitive stones; which he has collected during his various expeditions, and from parts which have been only visited by himself.

M. de Saussure has lately resigned the professorship of experimental philosophy, and is succeeded by my very worthy and ingenious friend Mr. Pictet Turretini, who has already distinguished himself by various publications, which elucidate
several

several important branches of experimental philosophy.

Paul Henry Mallet, born at Geneva in 1730, passed the earlier part of his life at Copenhagen as preceptor to the present king, Christian the Sixth. His introduction to the history of Denmark, under the title of Northern Antiquities, proves him a profound and accurate antiquarian; and his histories of Hesse, Brunswic, and Denmark, shew him no less eminent as an historian. I should on this occasion be unmindful of the honour conferred on me, if I omitted to mention, that his latest work is a translation of my Travels into Poland, Russia, Sweden, and Denmark, to which he has added many remarks, and a Journey into Norway.

M. de Luc, reader to the queen of Great Britain, and resident in England, is also a native of Geneva. He was born in 1727, and published, in 1772, his celebrated work on the modification of the atmosphere, and on the theory of barometers and thermometers: a performance which marks a distinguished æra in the history of experimental philosophy, and which we are happy to find he is still carrying on under the title of *Idees sur la Météorologie*. But in his *Lettres Physiques et Morales, sur l'Histoire, de la Terre et de l'Homme*, M. de Luc appears
to

to singular advantage. In this extraordinary performance, he has displayed a most extensive knowledge of nature, and has applied it with great sagacity in forming a new theory of the earth, and in a happy accommodation of his hypothesis to the Mosaic account of the creation.

The cabinet of M. de Luc is not only remarkable for the number and rarity of many specimens; but more particularly claims the attention of the naturalist, as it is a systematic collection, tending to illustrate his theory of the globe. With this view it may be divided into three principal parts. The first part contains petrifications and fossils; the second, the collection of stones; and the third, lavas and volcanic productions.

The first part is arranged in such a manner, under three distinct heads, as may enable the naturalist, 1. to compare the petrifications of animals and vegetables with the same bodies, which are still known to exist in our parts of the globe; 2. to compare those petrifications of animals and vegetables with the same bodies which are known to exist in distant countries; 3. to consider the petrifications of those bodies which are no longer known to exist.

The second part comprehends the stones under three points of view; 1. those of the primitive

tive mountains, which contain no animal bodies; 2. those of the secondary mountains, which contain only marine bodies; 3. those which contain terrestrial bodies.

In the third part, the lavas and other volcanic productions are distinguished into, 1. those from volcanos now in a burning state; 2. those from extinct volcanos.

I am, &c.

LETTER 64.

Government of Geneva in 1776.

THE city of Geneva and its territory were formerly united to the German empire, under the successors of Charlemagne: but as the power of the emperors, feeble even in Germany, was still weaker in the frontier provinces, the bishops of Geneva, like several other great vassals of the empire, gradually acquired very considerable authority over the city and its domains; which the emperor had no other means of counterbalancing,

terbalancing, than by increasing the liberties of the people. During these times of confusion, constant disputes subsisted between the bishops and the counts of the Genevois; for the latter, although at their first institution merely officers of the emperor, and considered as vassals of the bishops; yet claimed and asserted a right to the exclusive administration of justice. The citizens took advantage of these quarrels; and, by siding occasionally with each party, obtained an extension of their privileges from both.

But the house of Savoy having purchased the Genevois, and succeeded to all the prerogatives of the counts, with additional power; the bishops and the people firmly united, in order to oppose encroachments, which were no less prejudicial to the authority of the one, than to the liberties of the others. During this period, the respective pretensions of the counts, bishops, and citizens, were so various, as to form a government equally singular and complicated. The harmony, however, between the bishops and citizens, was at length broken by the artful management of the counts of Savoy, who had the address to procure the episcopal see for their brothers, and even for their illegitimate children. By these methods, their power in the city became so enlarged, that, towards the commence-

ment

ment of the sixteenth century, Charles the Third, duke of Savoy, (although the form of government was entirely republican) obtained an almost absolute authority over the citizens; and exercised it in the most unjust and arbitrary manner. Hence arose perpetual struggles between the duke and the citizens; the latter continually opposing, either by open violence, or secret measures, his tyrannical usurpation: thus two parties were formed; the zealots for liberty were called *eidgenossen*, or confederates, while the partisans of the duke were branded with the appellation of *mammelucs*, or slaves.

The treaty of alliance, which the town contracted with Berne and Friburgh, in 1526, may be considered as the true æra of its liberty and independence: for, not long after, the duke was deprived of his authority; the bishop driven from the city; a republican form of government established; and the reformation introduced. From this time, Charles and his successors waged incessant war against the town: but his hostilities were rendered ineffectual, by the intrepid bravery of the citizens, and the assistance of Berne.

In 1584 Geneva concluded a treaty of perpetual alliance with Zurich and Berne, by which it is allied with the Swiss cantons.

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The last attempt of the House of Savoy against Geneva, was in 1602; when Charles Emanuel treacherously attacked the town during a profound peace. Two hundred soldiers scaled the walls in the night, while the inhabitants were reposed in unsuspecting security; but being timely discovered, were repulsed by the desperate valour of a few citizens, who gloriously sacrificed their lives in defence of the liberties of their country. As a tribute of public gratitude for their glorious resistance, these brave Genevans were buried with great pomp, and their names are recorded on a sepulchral stone. In memory of this event, some of the scaling-ladders, by which the enemy entered the town, are preserved in the arsenal; and also the petard, which was fastened to one of the gates, when the gunner was killed before it could be discharged. The war occasioned by this perfidy was concluded in the following year by a solemn treaty: since that period, uninterrupted peace has been maintained between the house of Savoy and Geneva; although the king of Sardinia did not formally acknowledge, till 1754, the independence of the republic.

No sooner was peace concluded with the House of Savoy, than the flames of internal discord, so apt to kindle in popular governments, and

and which had been smothered by their common danger from a foreign enemy, began to appear. During the greatest part of the last century, to the present period, the history of Geneva contains little more than a narrative of contentions between the aristocratical and the popular parties. These mutual struggles have been occasionally exerted with so much violence and animosity, as to threaten, for a moment, a total revolution in the state; but, happily, they have been hitherto compromised without producing any fatal effects*.

About the beginning of the present century, the power of the Great Council was become almost absolute. In order to restrain its authority, the popular party, in 1707, procured an edict, that every five years a general council of the citizens and burghers should be summoned, to deliberate upon the affairs of the republic. Agreeably to this law, a general assembly was convened in 1712; and the very first act exerted by the people in this their collective capacity, was the abolition of the above-mentioned edict.

An event of so singular a nature, can hardly be accounted for upon the general principle of

* The reader will recollect that this letter was written in 1776, before the late Revolution of 1782, which is related in the subsequent letter.

popular fickleness and inconsistency : accordingly Rousseau, in his *Lettres écrites de la Montagne*, imputes it to the artifices of the magistrates ; and to the equivocal terms marked upon the billets then in use. For, the question proposed to the people being, “ Whether the opinion of the “ councils, for abolishing the periodical general “ assemblies, should pass into a law ? ” the words employed on the billets delivered for that purpose, were, *approbation*, *rejection* ; so that whichever side was taken, it came to the same point. If the billet of *approbation* were chosen, the opinion of the councils which rejected the periodical assembly, was approved ; if that of *rejection*, then the periodical assembly was rejected of course. Accordingly, several of the citizens afterwards complained that they had been deceived, as they never meant to reject the general assembly, but only the opinion of the councils *.

In consequence of this extraordinary repeal, the power of the aristocracy continued increasing till within these few years ; when the citizens, by a singular conjunction of favourable circumstances, joined to an uncommon spirit of union and perseverance, have procured several changes in the constitution of Geneva ; by which the au-

* Miscellaneous Works of Rousseau, Vol. iv. p. 279.

thority of the magistrates has been limited, and the rights of the people enlarged. Happy! if they know where to stop; lest, continuing to extend the bounds of their own privileges, they shake the foundations of civil government, by too much restraining the power of the magistrates.

The present constitution of Geneva, may be considered as a mean between that of the aristocratical and popular cantons: more democratical than any of the former, inasmuch as the sovereign and legislative authority entirely resides in the general assembly of the citizens; and more aristocratical than the latter, because the powers vested in the Great and Little Councils are very considerable.

The members of the Senate, or Little Council of twenty-five, enjoy, in their corporate capacity, several prerogatives almost as great as those which are possessed by that of the most aristocratical states. They nominate half the members of the Great Council; supply the principal magistrates from their own body; convoke the Great Council and the General Council; they previously deliberate upon every question which is to be brought before these councils: in other words, in them is lodged the power of proposing; consequently, as every act must originate from

them, no law can pass without their approbation. In this senate is vested also the chief executive power; the administration of the finances; and, to a certain degree, jurisdiction in civil and criminal causes. They nominate, likewise, to most of the smaller posts of government; and enjoy the sole privilege of conferring the burghership. They compose, moreover, in conjunction with thirty-five members of their own choosing, the Secret Council; which never assembles but by their convoking, and only upon extraordinary occasions.

These considerable prerogatives, however, are counterbalanced as well by the privileges of the Great Council, as by the franchises of the General Council. The privileges of the former consist in choosing the members of the senate from their own body; in receiving appeals in all causes above a certain value; in pardoning criminals; in disposing of the most important charges of government, those excepted which are conferred by the General Council; and in approving or rejecting whatever is proposed by the Senate to be laid before the people.

The General Council, or assembly of the people, is composed of the citizens and burghers of the town: their number, in general, amounts to about 1,500, but seldom more than 1,200 meet

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at the same time; the remainder being either settled in foreign countries, or usually absent. I ought to have explained to you sooner, the distinction between *citizens* and *burghers*; the latter, are either the sons of citizens or burghers *, born out of Geneva, or have obtained the burghership by purchase; the former, are the sons of citizens or burghers, born within the town of Geneva. The burghers may be chosen into the council of two hundred, but the citizens alone can enter into the Senate, and possess the charges appropriated to that body.

The General Council meets twice a year; chooses the principal magistrates; assents to, or rejects, the laws and regulations proposed by the councils; imposes taxes; contracts alliances; declares war or peace; and nominates half of the members in the Great Council. All questions are decided by the majority of voices; and each member delivers his vote without having the liberty of debating. The restriction is certainly reasonable; for, in a popular assembly, like this of Geneva, composed of citizens, the meanest of whom is well versed in the constitution of the

* The children of those who are employed in foreign countries, in the service of the state, although born out of Geneva, are entitled to all the privileges of citizens.

commonwealth, and where the people in general have a strong propensity to enter into political discussions ; if every voter was permitted to support and enforce his opinion by argument, there would be no end of debate, and the whole time would be consumed in petulant declamation.

But the principal check to the power of the Senate, arises from the right of *re-election*, or the power of annually expelling four members from the Senate at the nomination of the syndics, and from the privilege of *representation*. The right of re-election may be exercised in the following manner : the four syndics, or chiefs of the republic, are chosen annually out of the Senate by the General Council ; and there must be an interval of three years before the same members can be again appointed. The usual mode of election is as follows :—The Senate nominates from its own body eight candidates, who must be approved by the Great Council ; and out of these eight, the members of the General Council choose the four syndics. They have it in their power, however, not only to reject these eight candidates, but also all the other senators successively : and in that case, four members of the Senate retire into the Great Council, and an equal number of the last-mentioned

last-mentioned body occupy the places of the degraded senators.

With respect to the second restraint I mentioned upon the power of the Senate, the right of *representation*: every citizen or burgher has the privilege of applying to the Senate in order to procure a new regulation, or of remonstrating against any act of the magistracy. These representations have, perhaps, proved one of the principal means of securing the liberties of the people from the respective encroachments of the two councils; as they have frequently prevented the magistrates from stretching their authority to the same extent that has been practised in some other commonwealths of Switzerland. The magistrates are obliged to give an explicit answer to these representations; for, if the first is not considered as satisfactory, a second remonstrance is presented. According to the nature and importance of the complaint, the representation is made by a greater or less number of citizens; and it has sometimes happened that each remonstrance has been accompanied by several hundred, in different bodies.

The salaries of the magistrates are so inconsiderable, as not to offer any temptation on the side of pecuniary emolument: a sense of honour, a spirit of ambition, the desire of serving their

country, together with that personal credit which is derived from exercising any office in the administration, are the principal motives which actuate the candidates to solicit a share in the magistracy. Accordingly, the public posts are generally filled with men of the first abilities, and of the most respectable characters. The revenues of government, at the highest calculation, scarcely amount to 30,000 pounds a year; a sum, however, which, by a well-regulated œconomy, is more than sufficient to defray the current expences: so that this republic is enabled to provide for the security of its subjects, from an income which some individuals, in other countries, squander in pomp and dissipation.

It is very remarkable that, in a republic so free as this of Geneva, and where the true principles of liberty are so well and so generally understood, there should be no precise code of penal laws: for, although the form of the prosecution is settled, yet the trial of the criminal is private, and the punishment left to the decision of the magistrate. Nor are the franchises of the people ascertained with that accuracy which might be expected. Indeed, under Ademar Fabri, bishop of Geneva in the fourteenth century, a certain number of political regulations,
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both civil and criminal, together with several particular customs and franchises, were drawn up in form ; and the bishop took an oath to observe them. These statutes, if they may be so called, were also confirmed by Amadeus the eighth, duke of Savoy. This code, to which the people appeal in all cases of controversy, is compiled in a very inaccurate and confused manner, and the magistrates refuse to submit to its authority, because it was published before the independence of the republic was confirmed. The people have repeatedly demanded a precise code of municipal and penal laws, so express and determinate, as to prevent the arbitrary decision of the magistrate ; and although such a code was ordered to be compiled in 1738 and 1768, yet its compilation has been hitherto deferred.

The code of civil law is the most perfect part of the constitution : all matters concerning commerce being well regulated, and private property securely guarded. It is unnecessary to trouble you with a particular detail of the sumptuary laws ; they are much the same as those in most of the other states of Switzerland, where restrictions of that kind are enforced. But there is one law, relating to bankrupts, too singularly severe not to be mentioned. If a member of either
council

council becomes a bankrupt, he is immediately degraded; and from that moment is rendered incapable of holding any post under government, until he shall have discharged all the just demands of his creditors: even his children are subjected to the same disgrace; and no citizen can exercise any public employment, while the debts of his father remain unpaid.

In this city, as in all the other principal towns of Switzerland, a public granary is established. Magazines of this kind, useful in all states, are more particularly necessary in so populous a place as Geneva; which, if the neighbouring powers were to prohibit the importation of corn, might be exposed to the horrors of famine. This corn is dried by means of machines well contrived for that purpose; retailed to the innkeepers and bakers: a considerable profit accrues to government; and there is always, in case of necessity, a sufficient quantity in reserve to support the inhabitants during a year and an half.

Geneva is strongly fortified on the side of Savoy; and a garrison constantly maintained: but these fortifications, and this garrison, are only sufficient to guard them from any sudden attack; they could not defend them long
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against

against a regular siege. The great security of the republic consists in its alliance with the Swiss cantons, by means of Zurich and Berne: and, as it is the interest both of the kings of France and Sardinia to be in friendship with the Swiss, and to preserve the independence of Geneva; it derives its greatest security from a circumstance which, in some cases, would be the source of danger; namely, that its territory borders upon the dominions of such powerful neighbours.

This is the only republic in Switzerland, that has no regular companies in any foreign service; wisely prohibiting the enlisting of mercenaries in every part of its territory.

I am, &c.

LETTER

L E T T E R 65.

Account of the late Revolution at Geneva.—Origin and Progress of the intestine Troubles.—Siege and Surrender of the Town.—Changes in the Form of Government.—Emigration.—Project for a Genevan Settlement in Ireland—relinquished.

HAVING in a former letter sketched the general history of Geneva, and described the form of government existing in 1776; I shall now give an account of the late troubles, and relate the changes of the constitution in 1782. In this narrative, instead of entering into the alterations of party, I shall endeavour to develop the principal causes which excited the people to take arms, to imprison several of the magistrates, and, at length, to surrender the town, at the moment when they seemed most determined to defend it to the last extremity.

By the edict of 1768, tranquillity was, apparently, restored to Geneva, and several alterations were introduced into the antient constitution. By these changes, however, the intestine troubles were only smothered, but not extinguished; the

Negatives,

Negatives, or aristocratical party, discontented at the right of re-election extorted from them in 1768, which they considered as a species of ostracism, were ready to seize the first opportunity of obtaining its abolition; while the *Representants*, or partizans of the people, were inclined to push their advantages to the utmost, and to secure their victory by too precipitate an exercise of this new privilege.

The project for the compilation of a new code of laws, which, although ordered by the edicts of 1738 and 1768, had been hitherto delayed under various pretences, was another cause of misunderstanding between the two parties, and was the immediate occasion of the succeeding troubles. Many reasons induced the *Negatives* to oppose its compilation.

First; An accurate statement of the customs and usages would considerably diminish their prerogatives, by abridging the great discretionary powers, which the want of a precise code must necessarily entrust to the will of the magistrates.— Secondly; As, in order to furnish materials for such a work, it became absolutely necessary to search into the antient archives; it was surmised, that many titles would be exposed to the public eye, which would favour the pretensions of the House of Savoy; and that others would be brought

brought forward by the democratical party, in order to justify farther encroachments. The Representatives, however, continued to demand the compilation of a new code; and at length, in January 1777, forced the Negatives to consent to their demand, by excluding, according to their right of *re-election*, four members from the Senate or Little Council. In consequence of this measure, a committee, for the purpose of forming a code of laws, was appointed by the concurrence of the Little, Great, and General Councils. This committee was to exist two years; and the code was to be laid before the three Councils, for their joint approbation or rejection.

At length, on the first of September 1779, the committee submitted a sketch of the first part of this code to the Little and Great Councils, in order to profit by their observations, before it was presented to the General Council. Many articles, however, being considered by the Negatives as too democratical, met with great opposition; and the Senate proposed to the Great Council, that the Committee should be prorogued for the purpose of amending the code; but the Negatives, who formed the majority, decided, that the code should not be accepted, and that the committee should be dissolved.

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This measure was violently reprobated by one party as unconstitutional, and supported as warmly by the other. By the former it was argued, that the Great Council exceeded its powers; because the Little Council having laid before the Great Council the question, "Whether the powers of the committee should be prolonged?" the latter, instead of deciding that point, and *that* only; had determined, "that the code itself should not be accepted."—The popular party considered this mode of proceeding as an evident breach of the constitution: for it was argued that the Senate alone has the power of proposing, and the Great Council the privilege of approving or rejecting the motion, and not that of amending or altering it. Further, it was urged, that as the committee had been appointed conjointly by the three Councils, and the code was to be submitted to their approbation or rejection; the Great Council did not possess the right of cancelling the code, although they had that of dissolving the committee.

To these objections the Negatives answered; that the Great Council did not dissolve the committee; because, being appointed only for two years, it ceased of course at the expiration of that term: and that as to the necessity of submitting the approbation or rejection of the code proposed
by

by the committee to the three Councils ; it might be urged, that the Little and Great Councils had the sole prerogative of framing a new code, and of laying it before the General Council ; that they had acted inconsistently in permitting that Council to have any share in appointing the committee ; and, therefore, that they now only used their prerogative in resuming those powers which they had unwarily granted to others.

Many persons, however, were of opinion, that although the Little and Great Councils possessed the undoubted right of proposing to the General Council ; yet, as they had once admitted that Council to a share in appointing * the committee, they were imprudent in rejecting the code by their own authority ; and ought, at the expiration of two years, to have nominated, conjointly with the burghers, a new committee, for the purposes of compiling a code of laws, according to the edicts of 1738 and 1768.

In consequence of these disputes, the body of

* Strictly speaking, the names of the commissioners were not laid before the General Council ; but simply the proposal of appointing a committee. The commissioners were privately settled by the two parties ; and the burghers acceded to the proposition in general terms, as they previously knew, that the commissioners were mostly favourable to the popular party.

citizens remonstrating against this act of the Great Council, that assembly offered to undertake the compilation of the code; and to submit it to the public examination. The opposite party considering this offer as insidious, many debates took place, and various negotiations were carried on between the two parties, which only served to widen rather than heal the dissensions. At length the *Negatives*, considering the public tranquillity as endangered, appealed to their guarantees, France, Zurich, and Berne; and entreated them to protect the laws and constitution. But this appeal had no other effect than to heighten the distrust and suspicion of both parties. In this crisis of affairs, the *Negatives* redoubled their efforts to strengthen themselves by the accession of the natives, and to spread the seeds of jealousy between the latter and the citizens.

The natives, sons of the inhabitants, who had purchased the right of settling at Geneva, formed a numerous body, discontented and jealous of many exclusive privileges enjoyed by the citizens, and inflamed with resentment against them, for having, in 1770, banished eight of the principal natives, who, pretending that the rights of the burghership belonged to the natives as well as to the citizens, demanded, that instead of being purchased, it should be gratuitously conferred.

With a view of acquiring so considerable an accession to their own party, the Negatives courted the natives by careffes, subsidies, and entertainments; and issued a public declaration, that they were ready to confer upon them those privileges of trade and commerce, which had been hitherto exclusively confined to the citizens.

The count of Vergennes also openly favoured the design of the Negatives; and even wrote dispatches to the resident of France at Geneva in order to be communicated to the principal natives, who sided with the Negatives. These dispatches contained the highest expressions of approbation, and strongly recommended them to persevere in their attachment to that party. The attorney general conceiving this interference contrary to the established mode of proceeding, which required, that all dispatches from a foreign minister should pass through the hands of government, delivered to the Great Council a spirited remonstrance, displaying the danger which resulted from a private correspondence between the court of France and the natives. He artfully, indeed, surmized, that the report of the dispatch from the French minister to the natives, was false and insidious, and calculated to raise a misunderstanding between that power and the republic; and even advanced several arguments, which tended

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to prove the impossibility, that such an extraordinary correspondence could have been maintained.

The irony and spirit of this remonstrance were so offensive to the count of Vergennes, that he instantly obtained the deposition of the attorney general; and this public step in favour of the Negatives considerably increased their party among the natives.

In order to counterbalance the offers of the Negatives and the favour of France, the Representatives manifested the most generous intentions in behalf of the natives; and even promised, what they had hitherto reprobated in the strongest manner, to facilitate the acquisition of the burghership, and to bestow it as the recompence of industry and good behaviour.

Thus the two parties striving who should offer the highest terms, two factions were formed among the natives; and it was easy to foresee, that the first opportunity of recurring to force would be seized by the populace; many of whom had nothing to lose, and much to gain in times of tumult and confusion.

In effect, such an opportunity presented itself on the 5th of February 1781; when a particular quarrel brought on a general rising. Two neighbouring and opposite parties of natives, casually disputing, loaded each other with virulent re-

proaches; and from reproaches would have immediately proceeded to an assault, if the Syndies on one side, and the chiefs of the Representants on the other, had not quelled, by their presence, the rising tumult. The populace assembled on the occasion began to disperse; when a discharge of musketry was heard from the arsenal. Several youths, who sided with the Negatives, having taken possession of the arsenal, had fired*, by mistake, on some natives of their own party, killed one of them and wounded another. This discharge was considered by the Representants as the signal of a general insurrection. They instantly took arms, and marched, in three columns, to the arsenal; where, finding only a few young men, who had rashly fired without orders, they prudently restrained their resentment, and permitted the others to retire without molestation. They then continued under arms, and occupied the principal avenues of the city.

The next morning the committee of the Representants being summoned by the natives to fulfil their promises of granting additional privileges, and particularly of gratuitously conferring the burghership, held several meetings with the

* It is but justice to the Negatives to add, that, according to the opinion of some, this first insurrection was concerted, and the Representants fired first.

principal Negatives on that subject, but without success: for the latter, while they readily consented to the request of the natives respecting the augmentation of their commercial privileges, positively refused to facilitate the acquisition of the burghership.

Notwithstanding this refusal, the committee, embarrassed and alarmed at the number and threats of the natives, determined to abide by their promises, drew up an edict, which permitted the natives to carry on trade; to hold the rank of officers in the military associations; and conferred the burghership on more than a hundred persons, taken from the natives and inhabitants, and even from the peasants of the territory. This edict was laid before and approved by the three Councils; the Negatives absenting themselves on this occasion from their apprehensions of the popular party, who had made themselves masters of the city. By this measure the Representatives esteemed themselves secure of having inviolably attached the natives to their interest; and concluded that nothing more remained than to enjoy the fruits of their victory. Affairs, however, turned out otherwise; deputies being dispatched from Zurich and Berne in order to mediate between the rival parties, prevailed on the Representatives to lay down their arms; and before their departure declared the edict in favour of the natives to be

null and illegal. And when the question for executing that edict was laid before the Senate, it was repeatedly carried in the negative, under the just pretence, that the mediating powers had declared it to be illegal; that while the city was in the power of the Representatives, who were under arms, none of the members could venture to oppose it; and that therefore their assent, which had been extorted by fear, was absolutely null.

Inflamed by this refusal, the opposite party tendered, on the 18th of March 1782, another representation, in which they again summoned the magistrates to confirm the edict. The answer, expected with the most extreme impatience, was at length returned on Sunday the 17th of April, and concluded with saying, "Government is neither willing nor able to ratify the edict."

Although the committee endeavoured, first to conceal, and when that was impossible, to soften and palliate its contents, yet the generality of the natives, who found themselves excluded from the favourite object of their wishes, at the moment when they seemed most secure of obtaining it, crowded tumultuously in different parts of the city; repeating, one after the other, in a kind of frenzy, "Government is neither able nor willing to ratify the edict." As these cries of despair were followed by the most violent menaces; the popular chiefs, after several vain attempts to re-

strain the rising commotions, acquainted the magistrates with the general indignation; and endeavoured, though without success, to persuade them to recal or mollify their fatal answer. Meanwhile, night approached, ever favourable to tumults and insurrections, and brought on the crisis which ruined the republic.

Some of the lowest populace having set fire to a wooden barrack, cried out, "to arms;" on which signal the natives assembled in a tumultuous manner, and were joined by the most violent Representatives. The most moderate among the citizens, well convinced, that the fire was only a pretext, and that such an ill-timed insurrection would greatly prejudice their cause, dispersed themselves in various quarters of the town, and tried to prevail on the mob to retire; but without effect. Many were wantonly insulted; and a party, in attempting to secure one of the gates, having fired on the garrison who resisted, it became absolutely necessary for the citizens either to abandon the natives, or to join them in the insurrection. Having hastily adopted the latter measure, the officers of the popular party made their appearance, took possession of the town, and appeased the tumult. At length, after various unsuccessful negotiations to prevail on the Negatives to ratify the edict, the popular party arrested and confined a few of the magi-

strates and the principal Negatives ; and the chiefs of the Representatives, apprehensive that an immediate appeal to France would be the first consequence of their liberty, detained them in prison as hostages for their farther security.

As this arrest and imprisonment of the principal magistrates appeared a measure as daring and atrocious as contradictory to sound policy ; it may be proper to consider on what principles the Representatives acted, and by what arguments they defended their conduct. For this purpose it will be necessary to view the political situation of Geneva in the moment of this insurrection, with respect to the neighbouring states, and particularly in relation to France, of whose assistance the aristocratical party was secure, as soon as that power could interfere with effect and propriety.

The act by which France, Zurich, and Berne guarantied the constitution of Geneva, as new-modelled in 1768, was no longer in force ; a circumstance highly unfavourable to the popular party. For, as by this act, the king of France could not publicly interfere in the affairs of Geneva, except in concert with Zurich and Berne, he had only one voice ; and consequently could not effectuate any change in the government, provided those two cantons were united against him.

him. These shackles being highly displeasing both to the court of Versailles, and to the Negatives, who were protected by that court, the count of Vergennes, by a letter written on the 28th of September 1781, declared to the cantons of Zurich and Berne, that Louis the Sixteenth renounced the guarantee, because they had refused to enter into views for the purpose of restoring peace to Geneva; and in a dispatch to the Senate, bearing the same date, and to the same effect, he added; that the king, in renouncing the guarantee, did not withhold his protection from the commonwealth; but still reserved to himself the power of punishing the disturbers of public tranquillity, and of supporting the constitution. The greatest number of the Representatives weakly rejoiced at this measure, from an idle persuasion, that the minister, fatigued with their trifling disputes, and despairing to overcome the perseverance of the citizens, abandoned them to themselves; and, thus in the very act which inevitably prepared subjection, imagined that they saw the first gleam of absolute independence.

Soon after this renunciation, M. de Vergennes ordered a regiment to march into the land of Gex, which borders on the territory of Geneva; and the troops were still quartered on the frontiers, when the refusal of the Senate to confirm the edict

edict gave rise to the insurrection. In this situation, the popular leaders argued, that for a long time a pretext had been wanted to appeal to Versailles; and it was now found: they dreaded every moment to see the French troops at the gates of the town; they thought it therefore most adviseable to arrest and confine the magistrates, in order to intimidate them from calling in the succours of France, and to render them responsible for the public security.

Won over by these specious arguments, the body of citizens continued to act as if their power was likely to be permanent. They deposed several members of the Great and Little Councils, and appointed in their place an equal number of persons who were favourable to the cause of the Representatives. The Great Council thus new-modelled, executed the edict for conferring the burghership on the stipulated number of natives; and appointed a committee of safety, composed of eleven members, with very considerable authority. This committee entirely re-established public tranquillity; ordered the fortifications of the town to be repaired; and inspired the people with the most dangerous confidence in their own strength.

Zuric and Berne, on the first news of the late insurrection, interdicted their subjects from all intercourse

tercourse with a government founded on usurpation and violence; and strenuously advised the Syndics to exhort the citizens to an immediate restoration of the legal constitution: a moment's delay, they urged, would be inevitable ruin. A few days afterwards the French minister returned unopened the dispatches of the new Senate; and reminded the citizens of the king's solemn engagement to support the oppressed, and to protect the antient form of government. The citizens of Geneva, though thus deserted by their allies, were deaf to all admonitions, idly appealed to the justice of their cause; and disclaimed all overtures of accommodation except on their own terms.

During two months the citizens and natives, apparently secure within their ramparts, convinced either, that France durst not venture to attack them, or that the prisoners would be the immediate victims of such an attempt, and that they should be able to make a long and glorious resistance, would not even listen to any proposal of re-establishing the deposed magistrates; and could not be prevailed upon to sacrifice a part of their privileges, and particularly the right of re-election, for the security of the remainder.

At length, the storm gathering from all quarters, slowly approached, and hovered over the town.

town. The king of Sardinia and the canton of Berne, both seconding the views of France, dispatched troops against Geneva; and their respective generals, Messrs. de la Marmora and Lentulus, were ordered to act in concert with the French commander M. de Jaucourt, who had advanced to the frontiers at the head of a considerable detachment.

Nothing occasioned more surprise and indignation than the junction of Sardinia and Berne with the King of France; and yet no measure was more consonant to the views of those two powers.

The Sardinian monarch was interested in the preservation of a town, which is the chief source of industry and wealth to his subjects of Savoy; and whose intestine troubles had already caused a diminution of his revenue: and as he could not in common policy permit the French to increase their influence in these parts, and to quell, without his interference, the commotions of Geneva, he *voluntarily* tendered his assistance towards the accomplishment of so beneficial a purpose.

The Canton of Berne, desirous to prevent the interposition of foreign powers in the affairs of Switzerland, used, in a letter to the Syndics, the following exhortations. “Redouble your efforts
“with your fellow-citizens; and exert yourselves
“in

“ in order to compose the unhappy differences,
“ which must infallibly terminate in the destruc-
“ tion of the republic. A speedy re-establishment
“ of the legal government will restore to them
“ their faithful allies, who are anxious to employ
“ their good offices in behalf of the state.” But
when these well-timed admonitions proved ineffectual, and the perseverance of the citizens had drawn upon them the resentment of France and Sardinia; Berne could not tamely behold two such powers thus interfering in a crisis so important to her own particular welfare, and to the general interests of the Helvetic union; and as Zurich had prudently declined to take an active part against her antient ally, stood forth with that firmness and decision which characterise all her councils; and joined her forces to the confederate armies of France and Sardinia.

Notwithstanding this powerful combination, and even in the midst of these threatening appearances, the Genevans continued to repair the ramparts with indefatigable ardour. The peasants of the territory flocked of their own accord, and without pay, to mount guard, and to work at the fortifications; women, of all ranks, crowded to the ramparts, as to a place of public amusement; encouraging and animating the men to persevere in their labour; and some even sharing
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in their fatigue assisted in transporting burdens, or in planting cannon on the bastions. In the midst of this almost universal confidence, a few prudent persons, who foresaw the impossibility of resistance, fought in secret; but were obliged to disguise their real sentiments, and could not venture in public but with an air of hope, serenity, and fortitude.

Mean while the besiegers advancing on all sides, the three commanders held frequent consultations, and formed a general plan of attack. At length, on the 29th of June 1782, M. de Jaucourt dispatched a message to the Syndics; in which, after expatiating on the disinterested intentions of the king his master, and protesting that he respected the independence of the republic, and was only desirous of introducing good order, he added, that if they would not admit his troops, and accept the following preliminaries of peace, he must force his way into the town. Among other conditions, he exacted, that no person should appear in the streets, under pain of military punishment; that a certain number of citizens, among whom were all the chiefs of the Representatives, should in twenty-four hours retire from Geneva; that all arms should be delivered to the three generals; that the deposed magistrates should be instantly re-established; and that

that a final answer should be returned in two hours. The generals Lentulus and de la Marmora respectively insisted on the same conditions.

It is impossible to express the rage, indignation, and despair, which these humiliating conditions excited at Geneva. Without the least deliberation every person resolved to perish rather than accept them; and the moment of danger had no other effect than to animate and rouse the courage of the besieged. While they hurried to the ramparts, and were preparing for resistance, the Syndics secretly obtained from the three generals a delay of twenty-four hours. In this interval not only the men of all ages prepared for defence; but even women and children tore the pavement from the streets, and carried the stones to the tops of the houses, in order to roll them down upon the enemy, in case they should force their way into the town.

Such was the general ardour; that about eighty women and girls, dressed in uniforms, offered to form themselves into a company, for the purpose of defending their country. The committee of safety accepted their services, and placed them in a barrack, which by its situation was covered from the cannon of the besiegers. These amazons, with a spirit above their sex, refused a station that was not sufficiently exposed; and, as the
town

town soon afterwards surrendered, they had no opportunity of proving their patriotism by a display of their valour.

All these various signs of the most determined resolution, flowing unanimously from every rank, age, and sex, alarmed the Negatives, who never had suspected, that the people would carry matters to such desperate extremities. Accordingly, their partisans conferred with the most moderate among the Representatives, in order to find some means of reconciliation ; but without success.

At length the fatal hour arrived, in which the answer was to be returned : it was to expire at ten on Sunday morning ; and at the first beat of the drum the ramparts were covered with defenders. Although the most zealous had only calculated on 3000, above 5000 made their appearance. They seemed to be all animated with one and the same spirit ; and reminded each other of those brave citizens of Geneva, who by sacrificing their lives had repulsed, in 1602, the troops of Savoy, when the latter had treacherously scaled the walls during a profound peace. No one ventured even to hint at surrendering ; and all awaited the attack with the most determined intrepidity. In this crisis, the French general, at the intercession of the Negatives, alarmed for the fate of the
5 prisoners,

prisoners, again prolonged the period prescribed for the capitulation.

The first effect of these repeated delays was gradually to abate the enthusiasm of the women: they could not but feel that they were wives and mothers; and began to figure to themselves all the horrors of a town taken by assault, and a prey to a licentious and enraged soldiery. In the next place, timid and prudent persons could venture to conceal their fears under various pretences; and at length the committee of safety, hitherto strenuous in enforcing the necessity of resistance, suddenly changed their resolution, but artfully disguised their sentiments from the public, until it was too late to prevent the surrender.

In the present ferment of passions and prejudices, if the leaders had openly proposed a surrender, they would have been considered as traitors; they would only have endangered their own persons, and accelerated those calamities which they wished to avoid. For the purpose, therefore, of gradually bringing matters to the issue which they intended, they assembled the citizens in the respective circles; and after warmly extolling their general zeal and patriotism, represented, that if the city should be attacked in the night, it would be no longer possible to convene them. For this reason they hinted, that it

would be highly advantageous to the common cause, if each circle should nominate several deputies, with full authority to decide in their stead; adding, that they ought rather to appoint those persons, who, from their age and respectable character, could assist their country by advice, while others were defending it by their valour.

This council, composed of about a hundred citizens, met at six in the evening, on the first of July; and a few hours before the last term appointed for the surrender was about to expire. The chiefs opened the debate with long speeches, in order to prepare the minds of the assembly for the object which they had in view. After having represented the state of the fortifications, which were judged by the most intelligent engineers to be only sufficient for resisting an attack by storm, and not for maintaining a siege of more than three or four days; they at length ventured to lay before them the necessity of an immediate surrender. On the bare mention of that word, the most violent of the assembly instantly burst into reproaches, and accused the committee with an intention of betraying the republic. They declared, that they would instantly announce to their fellow citizens the treachery of their deputies: who were not appointed to deliberate upon a surrender,

render, but only upon the means of most effectual resistance. Apprehending the ill consequences of such a proceeding, one of the chiefs started from his seat, and barred the doors; while some of those who wished to retire, drew their swords, and shedding tears of despair, "To remain," they cried out, "a moment, was to share the treason, and to destroy their country." Every method was attempted to appease them: cries and exhortations were heard from all quarters.

At length, when the question concerning the surrender was proposed, a considerable majority voted for defending the city to the last extremity. On this determination, many of the most zealous, trusting to this decided majority, retired from the assembly, in order to prepare themselves for the hour of danger. Another consultation was then proposed by those who remained; the danger of dividing into parties, and of alienating the citizens from their leaders, was represented in the strongest colours. These suggestions being attended with effect; long debates recommenced. One of the youngest in the assembly, being affected with the pathetic consideration of the distress of those widows and orphans, whose husbands and fathers should fall by the hand of the enemy, was of opinion, that only those who were

unmarried, and who had no children, should be permitted to defend the ramparts. "We are not sufficient," he added, "to preserve the town from being taken; but enough to save our honour, and to obtain a less humiliating capitulation." He was interrupted by an elderly citizen, who claimed for fathers of families the glory of fighting for their country. "I have six sons," exclaimed he, with tears of exultation sparkling in his eyes, "and who shall prevent me from marching at their head to the ramparts?"

It was then proposed to conduct the hostages in the face of the French batteries, as a means of intimidating M. de Jaucourt from firing against the ramparts; for it was to be presumed, that he would not expose to certain destruction those magistrates whom he came to deliver. This opinion, which for a short time seemed likely to prevail, gave place to the more generous resolution of restoring the prisoners to liberty; of permitting the Negatives to retire to the enemy's camp; and then of preparing for a vigorous resistance. It was urged, such a noble mode of proceeding, in so alarming a moment, would probably soften the resentment of the aristocratical party; and induce them to obtain from the French general more favourable terms of accommodation.

Many hours were consumed in discussing these various opinions. The fatal period approached: it was midnight; and the chiefs, who had now contrived to strike the greatest number with a panic, won over the assembly to their sentiments, by proposing a general emigration; and consoled them, in the midst of their despair, with the hopes of enjoying that liberty in another country, which they could no longer expect to find in their own.

A declaration being then drawn up, to be delivered to the Syndics at the same time with the keys of the city; the hostages were instantly conducted to their respective houses; the chiefs summoned the principal officers from their posts; ordered the cannon of several batteries to be rendered unfit for service; and at length provided for their own safety by retiring from the town before the entry of the confederate troops.

When the unexpected news of the surrender was announced to the public, they became frantic with despair. Some mutually embraced each other without uttering a single word; others loaded their chiefs with the most dreadful imprecations; while a few, still determined to resist, ineffectually summoned their fellow citizens by beat of drum to their standards. The greatest

part, however, having discharged and broken their muskets, flung themselves with their faces to the ground, and lay motionless for a considerable time. At length a general retreat took place. The roads were covered with persons of both sexes, who fled hastily from the walls; and the Sardinians, who first entered the gates at five in the morning, found the city almost deserted.

The count de la Marmora, as if actuated by motives of compassion for the degraded situation of Geneva, marched in silence, and without an insulting display of military pomp; and, having occupied the town-house and the magazines for powder, visited in person the different quarters of the city, in order to dissipate all apprehensions of danger. About noon the two other commanders made their entry: they were accompanied by a large body of Negatives, and marched at the head of their respective troops, with drums beating and colours flying. Having joined the Sardinian forces, the three generals conducted the magistrates, lately delivered from prison, to the Great Council, and re-established them in their several charges, to the sound of martial music. The citizens were disarmed; each householder obliged to furnish the officers with quarters; the edict of the 6th of February 1781, which had conferred the

the burgherſhip on above a hundred natives, was annulled. In the miſt of theſe arrangements, the Great Council laid, with all due form, the foundation of a theatre: a troop of comedians was introduced; and the aristocratical party celebrated their triumph with balls, feaſts, and every ſpecies of public diverſion.

Mean while a committee appointed by the Great and Little Councils prepared, in concert with the three generals, an edict for new modelling the conſtitution; which being approved at the courts of Verſailles and Turin, and by the canton of Berne, was confirmed by the Great and Little Councils. But as it annulled many conſiderable rights hitherto enjoyed by the citizens, it was not probable, that it would be ratified by the General Council, in which the party of the Representants had ſtill a great majority. In order, therefore, to obtain its final confirmation, it was enacted, that, when the edict was laid before the General Council, thoſe Representants, who had taken up arms, ſhould for that time be excluded; under pretence that the inſurrection had rendered them unworthy of exerciſing their rights; and it was added, that they might eſteem themſelves extremely fortunate in not being expoſed to the utmoſt rigour of the laws.

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Accordingly,

Accordingly, on the 15th of November 1782, the members of the General Council assembled to the number of five hundred; above a thousand being excluded from giving their votes. And yet even this phantom of supreme power was surrounded with troops. Notwithstanding, however, the exclusion of so many, and the general panic, above a hundred Representatives, and even several Negatives, had the courage to reject the edict; which appeared to many, even among the Negatives, as establishing too rigorous an aristocracy.

The citizens of Geneva have incurred much ridicule and censure, for having so early and repeatedly expressed the most determined resolution never to surrender the town, and to resist until it was taken by assault. In a pamphlet, also, styled "*Lettre écrite des ramparts de Geneve*," the author combats all the arguments which might be urged in favour of a capitulation; and vehemently asserts, that he, as well as his fellow citizens, are resolved to defend the town to the last extremity, and rather to court death from the hands of the enemy than survive the extinction of their liberties. These assertions appeared mere ostentatious vaunts, as the pamphlet was not printed and dispersed until after the surrender; and

and led the public to attribute vain-boasting and cowardice, which are usually united, as essential characteristics of the people of Geneva.

On reviewing, however, the history of the revolution with impartiality, it cannot admit a doubt; that the people were unanimously against a surrender; that, till within a few hours before the confederate troops entered the gates, they expected, and were prepared for, an assault; that they had entrusted the command to the committee of safety; that the latter, alarmed at the near approach of danger, had suddenly changed their opinion; had betrayed them into a surrender against their intentions, and without their knowledge; and had taken such precautions as rendered all resistance impracticable.

As the committee has been greatly censured for this sudden change of opinion; it is but justice to add, that of eleven members and several adjuncts, who composed the committee, two thirds voted against the surrender. But in fact, of what avail was resistance at this period? Upon a supposition that the siege could have been protracted for a few days; the kings of France and Sardinia, and the canton of Berne, had fresh troops ready to march; and in less than a week so large a reinforcement would have been collected before the gates of Geneva, that any further
opposition

opposition must have been madness. In a word, the popular leaders acted wrong in buoying up the hopes of people, that resistance could be effectual; and by the reparation of the ramparts only served to inspire the public with a dangerous confidence, which they were not afterwards able to dissipate.

Such is the history of this extraordinary revolution; prepared for some time by the enmity of the two parties; occasioned by the impolitic tho' just demand of a code of laws; hastened by the two insurrections; and completed by the intrigue and arms of France. It must be acknowledged, that the Representatives, or popular party, acted in a most imprudent as well as unconstitutional manner; and particularly, that no excuse can be admitted for the second insurrection, and the imprisonment of the magistrates. The Representatives, by the edict of 1768, possessed great privileges, which in time would have placed in their hands the whole administration of government. As the greatest number in the General Assembly, they enjoyed the right of annually excluding four members from the Senate, and of filling half the vacancies in the Great Council; they must, therefore, in a few years, have inevitably obtained a decided majority. The most prudent among them saw this advantage, and
were

were contented; but the greater part, and perhaps a few of their leaders, eager to grasp immediately that power, of which they had only a distant prospect, precipitated measures; and acting, in a few instances, diametrically opposite to the first principles of their constitution, hastened its destruction. It must, at the same time, be confessed, that however imprudently or unconstitutionally the Representatives acted, yet that the Negatives, secure of support from the Court of Versailles, seemed to carry their confidence in their own strength to such a degree, as almost to court the troubles which ensued; and that they have availed themselves of their victory to a degree only to be palliated by absolute necessity. A new form of government introduced by force, must be supported by force; by calling in the assistance of France, they must be entirely submissive to that power; and by annihilating the first principles of liberty, in disarming the citizens and forbidding all public meetings, they are in danger of extinguishing that spirit of emulation and energy for which the Genevans have long been distinguished. Having established a rigorous aristocracy, they must necessarily adopt that jealousy and suspicion which not unfrequently characterises the magistrates under that species of government: and the only question now remaining,

ing, is, Whether the above-mentioned spirit of emulation and energy will be diminished by the change of constitution; and if so, whether that diminution will be counterbalanced by the introduction of a greater degree of tranquillity than is usually to be found in democratical states?

The changes in the form of government, introduced by this revolution, are principally comprized in the following articles.

1. The power granted in 1768 to the General Council, of re-election, or of annually excluding four members from the Senate, is abolished.
2. The privilege enjoyed by the same assembly, of nominating half the vacancies in the Great Council, is likewise annulled; and that body is now supplied by the Senate and Great Council, according to the following complicated mode of election:—In case of sixteen vacancies, the Great Council selects eight members from sixteen candidates proposed by the Senate; and in like manner the Senate chooses eight from the same number of candidates appointed by the Great Council.
3. The right of *representation*, or remonstrating, is taken from the citizens at large, and transferred to thirty-six adjuncts, who may be present
in

in the Great Council, on the first Monday of each month: they enjoy the privilege of making representations, and in that case have a deliberative voice. But, as they are removeable every year; and are drawn by lot from all the citizens in general, who may chuse to present themselves as candidates; they are considered as so extremely dependent on the will of the magistrates, and their representations have such little weight, that they are called in derision, *Les Images*, or The Shadows.

4. The introduction of the *grabeau*, or annual confirmation of the members of the Senate, and of the Great Council, exclusively vested in the last-mentioned body. This law, which may be considered as the basis of the new constitution, has transferred to the Great Council part of the authority both of the Senate and of the General Council. By subjecting the Senate to this annual revision, it has rendered that body greatly dependent on the Great Council; which by the present constitution is become, what the Senate was according to the form of government established in 1738 and 1768, the center of the aristocracy.

5. The circles, or clubs, in which the citizens used to be convened, and all public assemblies,

blies *, are prohibited; and they are only allowed to meet at coffee-houses. This prohibition was at first carried to an extreme degree of jealousy, highly derogatory from every principle of free government; but lately it has been somewhat modified; and assemblies are permitted to be held in the country, though not within the walls of Geneva.

* One instance of the ill effects arising from this prohibition, fell under my observation: The Society of Arts in Geneva, many of whose members are persons of great abilities and learning, has already given to the world several interesting publications. But as all public assemblies are prohibited, government was suspicious lest this literary society should indulge itself in political questions; and accordingly no meeting has been held since the late revolution. Indeed, when I was at Geneva, it was then in agitation to suffer the society to assemble; but it was very uncertain whether this permission would be granted; and if granted, whether it would not be greatly fettered by the diminution of the number of its members, and by several other restrictions, incompatible with the freedom of literary disquisitions. It is a matter of little consequence to Europe in general, whether the government of Geneva is more or less aristocratical or democratical; but it is an object of general importance, whether a literary society should be prevented, by political jealousy, from holding those assemblies, which will afford a means and opportunity of continuing to supply the world with learned and interesting publications.

6. The militia is abolished; firing at marks, even with bows and arrows, prohibited; and the guard of the town, instead of being consigned to the citizens, is entrusted to a garrison of 1000 foreign soldiers, whose colonel and major are both foreigners: these troops take an oath of fidelity to the republic, and of obedience to the Great Council, and to the Committee of War; they are under the immediate command and inspection of the latter, and subject to the superior controul of the former. This garrison may be augmented to 1200, and reduced to 800 men, at the will of the Great Council; but cannot be further enlarged or diminished without the consent of the General Council.

7. No citizen, native, or inhabitant, is permitted to have arms. It is not unworthy of remark on this article, that although by the antient constitution every citizen was obliged to provide himself with arms, under a certain penalty; yet, that when these were delivered up, government did not reimburse the expence.

8. Several taxes were imposed without the consent of the General Council; but for the future, every change or augmentation of the revenue must be submitted to that body.

9. Various privileges, respecting the equal rights to trade and commerce, formerly possessed by

by the citizens alone, have been conferred on the natives and inhabitants; a liberal concession, to which both parties willingly acceded.

P O S T S C R I P T.

THE Genevans seemed so greatly to deplore the diminution of that liberty to which they had long been accustomed, and to which they ascribed the late remarkable increase of their population and riches, that if we had judged from the discontents and consternation of the citizens, we might have concluded the change of government would have been followed by an almost general emigration. The event, however, has not justified this conclusion. Excepting the principal leaders, those of the popular party who were banished, and a few others who renounced their country in compliance with their political principles; the greatest part of the emigrants returned, and again settled in the place of their nativity. And perhaps it may be affirmed with truth, that the late revolution has scarcely driven six hundred persons from Geneva.

The emigrants have principally established themselves at Brussels and Constance*; where they have introduced manufactures of printed linens and watch-making.

* See Letter 3.

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I cannot quit this subject without recalling to your recollection, the plan for giving an asylum to the Genevan emigrants in Ireland, which so long engaged the public attention.

Soon after the revolution, a memorial signed by above a thousand Genevans of both sexes, who were either persons of some property, or versed in trade or manufactures, expressing a desire of settling in Ireland, was presented to Earl Temple (now Marquis of Buckingham) then Lord Lieutenant of Ireland. His Excellency, conscious of the advantage which must result to Ireland from the reception of so many industrious artists, many of whom possessed property in the English, Irish, and French funds, communicated, on the 27th of September 1782, the proposal to the Privy Council of Ireland for giving an asylum to the Genevan emigrants. This proposal, patronized by the Lord Lieutenant, and unanimously consented to by the Privy Council, was approved by the King. The nobility and gentry of Ireland seemed to vie with each other in countenancing the settlement; the Irish parliament voted £. 50,000 towards defraying the expences of their journey, and building a town for their reception; lands were purchased for £. 8000 in a convenient situation near Waterford; part of the New Geneva was actually completed, at the

expence of £. 10,000; a charter was granted with very considerable privileges; the standard of gold was altered for the accommodation of the watch manufacturers; the foundation of an academy approved, upon an useful, extensive, and oeconomic plan*; in July 1783, several Genevans landed in Ireland; and when the nation had expended near £. 30,000, the project was suddenly relinquished, and the settlement finally abandoned.

The failure of this project may be principally attributed to the following cause.—If the settlement could have been immediately carried into execution, the Genevans would have emigrated in very considerable numbers; but many necessary delays were occasioned by the arrangement of so complicated a plan, by the high demands of the Genevan commissioners, who, in drawing up the charter, required many privileges which were contradictory to the laws of the land, and by the building of the New Geneva. These delays naturally giving

* The total expence of the academy would, at the highest calculation, have amounted to £. 4554 per annum, and at a more moderate valuation to only £. 3924. For this sum forty-four professors, assistants, and masters would have been maintained; a public library established; and the expences of a student, in the article of education, would not have exceeded £. 164. 18s. for thirteen years, or about £. 12 per annum.

time for the resentment of the Genevans to subside, many returned and took the oaths of allegiance to the new government.

To this circumstance must be added the departure of Earl Temple, in May 1783, who was the great patron and promoter of the settlement; that the project, as it lost its novelty, gradually became less popular; that the few Genevans, who had prematurely landed in Ireland, although maintained at the public expence, yet were discontented, at not finding the new town prepared for their immediate reception; and that particularly, as those among the proposed emigrants who had most property had withdrawn their names; the remainder did not possess a sufficient capital to settle in a foreign country, and to establish an expensive branch of manufacture without still farther assistance.

In consequence of this deficiency, the Genevan commissioners petitioned to appropriate £. 10,000 of the £. 50,000 for the purpose of forming a capital. But, as that sum had been voted by parliament for other purposes, this petition was necessarily rejected; and the Genevans, in an address to the Duke of Rutland, lord lieutenant of Ireland, relinquished the settlement; and soon afterwards quitted that country.

L E T T E R 66.

General Reflections.

HAVING, in the course of my former letters, communicated to you such observations as occurred to me during my tour through Switzerland, concerning the laws, government, and situation of each canton in particular; I will now lay before you a few concluding remarks, in relation to the state of that country in general.

No part of Europe contains, within the same compass, so many independent commonwealths, and such a variety of different governments, as are collected together in this remarkable and delightful country; and yet, with such wisdom was the Helvetic union composed; and so little have the Swiss, of late years, been actuated with the spirit of conquest, that since the firm and complete establishment of their general confederacy, they have seldom found occasion to employ their arms against a foreign enemy; and have been troubled with no civil commotions that were not soon happily

pily terminated. Perhaps there is not a similar instance in antient or modern history, of a war-like people, divided into little independent republics, closely bordering upon each other, and occasionally interfering in their respective interests, having continued, during so long a period, in an almost uninterrupted state of tranquillity. And thus, while the several neighbouring kingdoms suffer, by turns, all the horrors of war, this favoured nation enjoys the felicity of looking down with security upon the various tempests that shake the world around them.

But the happiness of a long peace, has neither broken the spirit, nor enervated the arm of the Swiss. The youth are diligently trained to martial exercises, such as running, wrestling, and shooting both with the cross-bow and the musket; a considerable number of well-disciplined troops are always employed in foreign services; and the whole people are enrolled, and regularly exercised in their respective militia. By these means they are capable of collecting a very respectable body of forces, which would prove formidable to any enemy who should invade their country, or attack their liberties. Thus, while most of the other states upon the continent are tending towards a military government, Switzerland alone has no

standing armies ; and yet, from the nature of its situation, from its particular alliances, and from the policy of its internal government, is more secure from invasion than any other European power.

The felicity of Switzerland, however, does not consist merely in this peculiar exemption from the burdens and miseries of war ; as there is no country in which happiness and content more universally prevail among the people. For, whether the government is aristocratical, democratical, or mixed ; a general spirit of liberty pervades and actuates the several constitutions : so that even the oligarchical states, which are usually the most tyrannical, are here peculiarly mild ; and the property of the subject is in general securely guarded against every kind of violation.

But one general defect prevails in the criminal jurisprudence of the country. For, although the Caroline code, as it is styled, or the code of the Emperor Charles the Fifth, forms in each of the republics the principal basis of their penal laws, with particular modifications and additions in different districts ; yet much too great a latitude is allowed to the respective judges, who are less governed in their determinations by this code, or any other written law, than by the common principles of equity. How far long experience may

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have

have justified the prudence of trusting them with this extraordinary privilege, or how far the severity of the Caroline code renders it necessary, I cannot say; but discretionary powers of this kind, are undoubtedly liable to the most alarming abuse; and can never, without the greatest hazard, be committed to the hands of the magistrate.

Upon this occasion, I cannot forbear reflecting on the superior wisdom, in the present instance, as well as in many others, of our own most invaluable constitution; and indeed, it is impossible for an Englishman to observe the governments of other countries, without becoming a warmer and more affectionate admirer of his own. In England, the life and liberty of the subject does not depend upon the arbitrary decision of his judge, but is secured by express laws, from which no magistrate can depart with impunity. This guarded precision, it is true, may occasionally, perhaps, be attended with some inconveniences; but they are overbalanced by advantages of so much greater weight, as to be scarcely perceptible in the scales of justice. I do not mean, however, to throw any imputation upon the officers of criminal jurisdiction in Switzerland: as far as I could observe, they administer distri-

butive justice with an impartial and equitable hand.

I remarked, with peculiar satisfaction, the excellent state of the prisons, and the humane precautions which the several legislatures have adopted in relation to felons: a circumstance that struck me the more forcibly, as the contrary is but too visible in England. In Switzerland, the criminals are confined in wholesome and separate wards; and instead of languishing in prison, to the great injury of their health, or total waste of their little remnant of money, are almost immediately brought to trial. In England, an accused person may be confined six months, or more, before his fate is determined: and if he is proved innocent, and should be in low circumstances; the loss of his time, together with the expences of the jail-fees, may probably occasion his utter ruin; while his morals are in no less danger, by being compelled to associate with a set of abandoned wretches, lost to all sense of shame, and encouraging each other in their common profligacy. How much is it to be lamented, that, while our code of criminal jurisprudence is in general formed upon principles, which distinguish us with honour among the nations of Europe; that our courts of justice are thrown open to the view of all the world; and that we enjoy

enjoy the inestimable and almost peculiar privilege of being tried by our equals; how much (I cannot forbear repeating) is it to be lamented, that the same equitable and humane spirit should be found wanting in so important an article of our penal laws!

For a more particular account of the prisons in Switzerland, I would refer you to my friend Mr. Howard's publication * on the subject. In this work the benevolent author has given many melancholy instances, that the English jails are much inferior to foreign prisons in cleanliness and good government. He must, however, feel the most sensible satisfaction in finding, that his labours have already produced several advantageous regulations, particularly concerning the fees of prisoners who shall be acquitted, and the prevention of the gaol distemper. Yet much still remains to be effected. But as Mr. H. continues his laudable researches, it may justly be hoped, that he will at length effectually fix the attention of the British Senate upon an object so highly deserving the care of every wise and humane legislature.

* The State of the Prisons in England and Wales, &c. &c. Third edition, 1784. And an account of some foreign prisons.

It is a matter of astonishment, as well as of concern, to find, that in a country where the true principles of civil government are so well understood and so generally adopted as in Switzerland, that the trial by torture is not yet abolished: for, in some particular cases, the suspected criminal is still put to the rack. The inefficacy, no less than the inhumanity, of endeavouring to extort the truth by the several horrid instruments which too ingenious cruelty has devised for that purpose, has been so often exposed by the ablest writers, that it would be equally impertinent and superfluous to trouble you with any farther reflections upon the subject: and indeed, the whole strength of the several arguments urged upon this occasion, is comprised in the very just and pointed observation of the admirable la Bruyere, that *la question est une invention merveilleuse & tout-à-fait sûre, pour perdre un innocent qui a la complexion foible, & sauver un coupable qui est né robuste* *. I cannot, however, but add, in justice to the Swiss, that zealous advocates have not been wanting among them for the total abolition of torture: but arguments of reason, and sentiments of humanity, have been found, even in this civilised and enlightened

* Caractères, Vol. ii. p. 203.

country, to avail little against inveterate custom and long-confirmed prejudices *.

During my subsequent expeditions into Switzerland in 1785 and 1786, I was extremely happy

* Criminal justice is here, as in the greatest part of Europe, administered agreeably to the rules of the civil law. According to the maxims of that code, the criminal's confession is absolutely requisite for the infliction of capital punishment; and consequently, all those nations, which have not established a new code of criminal jurisprudence, retain the use of torture.

The present king of Prussia set the example, in Germany, of abolishing this inhuman practice; but few, perhaps, are apprised, that the first hint of this reformation was suggested to him by reading the History of England. For, one of the principal arguments in support of this method of extorting confession, being, that it affords the best means of discovering plots against government; the sagacious monarch remarked, that the British annals fully confute the fallacy of that reasoning. Few kingdoms, he observed, had abounded more in conspiracies and rebellions than England; and yet the leaders and abettors had been more successfully traced and discovered, without the use of torture, than in any country where it was practised. "*From thence,*" added this wise politician, "*I saw the absurdity of torture, and abolished it accordingly.*"

This anecdote, which I received from very respectable authority, bears the most honourable testimony to the efficacy as well as the mildness of our penal laws, and to the superior excellency of the process observed in our courts of criminal justice.

to find, that the absurdity as well as inhumanity of torture was more generally admitted. It has long been suppressed in Geneva; in many of the aristocratical cantons it is virtually, though not formally abandoned; and, as I have before had occasion to observe *, its public abolition in Berne forms a distinguished æra in the history of Swiss jurisprudence; and, it is to be hoped, is the prelude to its total disuse throughout Switzerland.

Learning is less generally diffused among the catholic than the protestant states: but in both, a man of letters will find abundant opportunities of gratifying his researches and improving his knowledge. To the natural philosopher, Switzerland will afford an inexhaustible source of entertainment and information, as well from the great variety of physical curiosities so plentifully spread over the country, as from the considerable number of persons eminently skilled in that branch of science. Indeed in every town, and almost in every village, the curious traveller will meet with collections worthy of his attention.

With respect to agriculture; there are, perhaps, few countries, wherein the advantageous effects of unwearied and persevering industry are

more remarkably conspicuous. In travelling over the mountainous parts of Switzerland, I was struck with admiration and astonishment, to observe rocks, that were formerly barren, now planted with vines, or abounding in rich pasture; and at marking the traces of the plough along the sides of the steepest declivities. In a word, the inhabitants seem to have surmounted every obstruction of soil, situation, and climate; and to have spread fertility over various spots, which nature seemed to have consigned to everlasting barrenness. In fine, a general simplicity of manners, an open and unaffected frankness, together with an invincible spirit of freedom, may justly be mentioned, in the number of those peculiar qualities which dignify the public character of this people; and distinguish them with honour among the nations of Europe.

I have now laid before you the principal observations which occurred to me in my journey through Switzerland: happy! if they may in any respect have contributed to your information or amusement. They were originally intended merely as a private memorial of friendship; but I have an additional satisfaction in
this

this opportunity of publicly testifying the sincere
esteem and regard with which I am,

Dear Sir,

Your very affectionate,

and obliged friend,

WILLIAM COXE.

A P P E N D I X

TO

VOLUME THE SECOND.

A P P E N D I X

VOLUME THE SECOND

A P P E N D I X
TO THE
S E C O N D V O L U M E.

A Catalogue of the principal books occasionally consulted in the course of this publication.

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*Die Eisgebuerge des Schweitzerlandes beschrieben
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Johannen Guler von Weineck. Fol. Coira,
1616.

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L.

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END OF THE SECOND VOLUME,

S U P P L E M E N T
TO THE
S E C O N D V O L U M E.

*Account of the late Tumults and Revolution of
Geneva in 1789.*

I HAVE delayed the publication of this work, which was ready to be delivered, on account of the revolution recently experienced at Geneva, which has greatly changed the form of government established in 1782, and described in the 65th letter.

I have, accordingly, spared no pains, which the shortness of the time would admit, to collect the most authentic intelligence; and here submit to the reader a short account of the causes and termination of the late tumults, which have been the means of restoring Geneva to its former liberty.

The edict of pacification passed in 1782 succeeded to a long series of dissensions between the

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popular

popular and aristocratical parties. The three powers of France, Sardinia, and Berne, by whose dominions Geneva is encircled, beholding, with regret and displeasure, the flames of civil discord continually smothered, and continually bursting forth on the slightest occasion, had combined in order to settle a *fixed* and *permanent* constitution, and took such precautions as seemed calculated to prevent in future any effectual opposition to the government which they thought proper to establish. By the combined forces of the three powers the far greater part of the Genevans were compelled to submit to the most grievous conditions: the exile of their popular chiefs; the prohibition of carrying arms; and a foreign garrison quartered in barracks, at the entire disposal of government, formed the basis which supported the new constitution.

From that period a calm of a few years, almost unknown to the republic, succeeded; but it was a fullen and a lowering calm; the people were kept in order by the precaution of a military force, not calculated for a small republic; the taxes imposed for the maintenance of that military force, and for building barracks, were heavy; and their burden was felt the more, because

because they constantly reminded the Genevans of their humiliation and subjection.

During my subsequent visits to Geneva, in 1785 and the following year, I found an almost general discontent prevailing among all parties; many of the Negatives disaffected; the Representatives submitting in silent and fullen despair; and the people without spirit and energy. The wisdom of many of the regulations passed in 1782 was overlooked, or forgotten; those only which annihilated the first principles of liberty were remembered; and almost the only sentiment which prevailed, was the sentiment of degradation, arising from the subjection of a free people to a military government.

In this state of affairs and general disaffection to the ruling party, many of the citizens secretly entertained hopes of another revolution; either founding their expectations on the embarrassed situation of France, or on the favourable disposition of the Great and Little Councils; the members of which had for some time fatally experienced many difficulties in supporting the authority of government. The minds of the greatest part were ready to take advantage of every incident likely to effect a change of government.

Such a general spirit of disaffection had gone forth among the people, that administration had

been compelled to employ a military force in order to quell a tumult, which took its rise in the theatre on the 12th of December 1788.

The quelling of this tumult was only a temporary remedy ; and the popular discontents broke out uncontrouled on the 26th of January, on account of the publication of an edict raising the price of bread a farthing in the pound. This augmentation, though justified by the scarcity of flour, and passed principally with a view to prevent the exportation of bread, was yet imprudently laid on in the present temper of the people. An insurrection instantly took place ; the bakers shops were pillaged, and on the following day a carriage laden with bread, and escorted by soldiers, was plundered in its way to the distribution office in the quarter of St. Gervais. The soldiers, firing at the populace killed one man and wounded another : the numbers and fury of the rioters increased ; they drove away the troops, and carried the body of the deceased, in a kind of funeral procession, before the town-house, as a memorial of violence and oppression. The populace, roused to frenzy at this spectacle, attacked and occupied two gates of the city, and dangerously wounded the commanding officer, as he was endeavouring to restrain the ardour of his soldiers and the fury of the people.

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In all tumults and insurrections the first moments are precious. The magistrates, instead of acting decisively, had lost them in deliberation; and the position of government became more and more embarrassing. On the present occasion it was necessary either to retake the gates, which had been occupied by the insurgents, or to confess, that the military force, by which they had hitherto kept the people in awe, was no longer capable of enforcing obedience. The military committee, charged with the command of the garrison for the security of the city, fluctuated between their duty to quell the insurrection, and their repugnance to shed the blood of their fellow citizens. In this dilemma they hesitated for some time, and at length ordered two bodies of troops to force their passage over the two bridges of the Rhone which separate the quarter of St. Gervais from the remainder of the city, and to retake the gate on the side of Switzerland. They flattered themselves, that the people would retire at the first appearance of a considerable body of soldiers. But it was now too late: the insurgents had already formed a strong barricade, behind which they played off two fire-pumps, filled with boiling water and soap-lees, against the extremities of each bridge; the cross fire of several small arms, which poured from the win-

dows and tops of the adjacent houses, wounded several soldiers and killed the commanding officer; the pavement of the streets was torn up, and carried to the tops of the houses, in order to be hurled down upon the troops, if they forced the barricades and penetrated into the streets. Meanwhile the tumult spread itself into the other parts of the city, and was in danger of becoming universal. In this state of affairs the magistrates, finding that they could not quell the insurrection without great effusion of blood, found themselves under the necessity of complying with the demands of the insurgents. One of the principal magistrates repaired in person to the quarter of St. Gervais, proclaimed an edict for lowering the price of bread, granted a general amnesty, and released all the insurgents that had been taken into custody. These concessions restored indeed a momentary calm; but produced the very effect they were intended to avoid. The leaders of the disaffected party, now convinced, either of the inability or unwillingness of government to employ a sufficient degree of force, and foreseeing that the moderation which had been just adopted must be continued, held themselves in readiness to take advantage of any opportunity which presented itself of exciting or encouraging another insurrection, in order to effect a change of

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of government, and a recovery of former privileges. Such an opportunity presented itself on the 29th of January, at the interment of a woman who had been casually killed by the discharge of the military in the tumult of the 26th. An immense concourse of people attended the funeral; and the magistrates imprudently ordered the garrison to be ranged and posted with cannon, for the security of the barracks and the city gates against any attempts of the multitude. The populace, believing that the garrison was drawn out in order to recommence hostilities, rose instantly, with one accord directed their fury against the soldiers, drove them from their posts, disarmed them, and took possession of the city gates without opposition.

This second tumult convinced the magistrates that all farther opposition was fruitless. For, as the generality of the citizens and burghers, instead of taking an active part in quelling the tumults, had rather seemed to countenance and encourage them, it was evident, that the loss of their liberties, and the humiliation to which they were reduced by the edict of 1782, had absorbed every sentiment of affection and reverence for an administration, which, however just and reasonable in its measures and conduct, was founded on the principles of despotism, and supported by

force. Impressed with these considerations, and finding by experience that a military government was both inexpedient and ineffectual, the chiefs of the aristocratical party suddenly changed the system, by which they had been hitherto guided, and renounced, by a very extraordinary revolution in their sentiments, that line of conduct to which they had before so obstinately adhered. They now felt, that in so small a republic, and with such few objects of ambition, the only permanent recompence of their political labours could be drawn from the esteem, attachment, and confidence of their fellow-citizens; they felt also, that, acting from that principle, the wisest conduct to be adopted on the present occasion was, to change a constitution which had been proved to be essentially defective; and which, while it abridged or annihilated the dearest rights and privileges of a freeborn subject, was ineffectual in maintaining itself by the usual companion of despotism, the terror of a military force. When, therefore, the Solicitor General, in the name of the citizens and burghers, solicited the recovery of their antient liberties, the permission of bearing arms, the re-establishment of the militia, and of their circles or political clubs; the removal of the garrison from the barracks; and the recall of the Representatives,

sentants, who were banished in 1782; such moderate demands were received with complacency and even satisfaction.

The two parties, fatigued with past dissensions, and anxious to reunite in the common cause, consented to sacrifice something of their respective claims, and to use the power reserved to them in 1782, by the guaranties, of amending and changing the laws, by a majority of three-fourths. The preliminaries were settled without difficulty; a committee was appointed to revise and amend the edict of 1782; the new edict of pacification, under the title of *Modifications à l'Edit de 1782*, were approved by the Senate, Great Council, and General Council. Such was the almost general unanimity with which this business was transacted, that in the assembly of the General Council which met on the 10th of February, the *modifications* were carried by 1321 suffrages against 52. The publication of the new edict was followed by the loudest acclamations and general rejoicings; and the consent of the three guaranties is solicited, and expected with great impatience.

The edict of 1782 is valid in all the articles which are not repealed or amended by the present *modifications*; or, to use the words of the present amendments, "The edict of the 21st of November
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ber 1782, with the modifications introduced by the present edict, and the political code published on the 13th of June 1783, shall be the fundamental law of the state, and shall form the complete collection of its political statutes."

The constitution is now wisely modelled into a mean between the too popular form established in 1768, and the too aristocratical form established in 1782.

The magistrates have consented to repeal the most obnoxious articles in the edict of 1782; which may be principally reduced to the following heads:

1. The garrison is subject, as before the edict of 1782, to the orders of the Senate, of the Syndic of the Guard, and of the members of the Great Council; and is to be no longer quartered in barracks. The garrison is to be gradually reduced to 600 men; but to be increased to 720, at the will of the Great Council. The officers are to be chosen by the Great Council, from the citizens, burghers, and natives.

2. The militia to be re-embodied, and the military exercises to be renewed. A regiment of volunteers to be formed from the citizens, burghers, natives, and inhabitants, under the orders of the Senate and Syndic of the Guard.

3. All citizens, burghers, natives, inhabitants, and subjects, are permitted to bear arms; all other persons dwelling in the city are prohibited from carrying fire-arms without permission.

4. The circles, or political clubs, are re-established; but they are forbidden to deliberate or vote on the affairs of state or the operations of government.

5. Some additional powers are granted to the thirty-six adjuncts, which increase their importance, and consequently the weight of their representations.

6. All persons banished by the edict of 1782 are to be recalled, if the consent of the three powers can be obtained; and those, who were deprived of their burghership on account of refusing to take the oath of allegiance to the government established in 1782, are to be reinstated in their rights.

In return for these concessions on the part of the magistrates, the popular party consent to the articles in the edict of 1782, which abolished the right of re-election, and transferred the right of representation to the thirty-six adjuncts.

They have acted wisely in renouncing the right of re-election, that species of ostracism, and source of so much jealousy and suspicion, which principally occasioned the troubles that preceded the

the revolution of 1782. They have no less prudently consented to abolish the right of representation, as it was vested, before the edict, in every citizen and burgher. The use, or rather the abuse of this right, occasioned frequent tumults and seditions, by the promiscuous assembling of a large number without order; and it was found to be a dangerous expedient to employ a multitude as an engine for political purposes.

By the edict of 1782 it was stipulated, in favour of the natives, that during the term of ten years five natives, and after the expiration of the said term, three natives, should be annually chosen burghers. On the present occasion a farther clause was added in their favour; that the burghership should be conferred on all natives of the fourth generation, when they shall have attained the proper age.

Time can only discover whether the present form of government will be more permanent than the former constitution; or whether a few years may not bring about another revolution. It bears, however, strong marks and characters of permanency, if we may augur from the present temper and disposition of the parties.

The alterations are just, reasonable, and even necessary.

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It is the first time that all the orders of the state freely, and as it were unanimously, consented, and that scarcely the least disaffection or murmurs have followed. The revolution of 1768 was the triumph of the popular over the aristocratical party; and of 1782, the still greater triumph of the aristocratical over the popular party. But the present change of the government was accompanied and followed by the triumph of neither party. It was formed by the coalition of both; it was the general sense of the whole republic united, in order to repeal what experience had shewn to be defective and inconsistent with republican freedom in the edict of 1782; and to retain what experience had shewn to be expedient and analogous to the spirit and principles of the constitution.

The pacification was instantly followed by marks of cordiality and attention, between the individuals of two parties, never before experienced. The sons of the principal Negatives have frequented the circles of the burghers; the magistrates, who could not be reproached with any abuse of their power since the edict of 1782, have obtained the confidence of the people from the moment that they renounced the support of a foreign garrison quartered in barracks, and expressed their resolution of entrusting the preserva-

tion of the state to the citizens, burghers, and natives.

No monument of that military force, so odious and yet so useless, will remain. The barracks of the town-house are already evacuated, and will be converted into a public library; the new barracks, built at an enormous expence, and more calculated for the garrison of a powerful and despotic kingdom than for a small and free commonwealth, will be converted into a building for the university. The reformation of the studies, which have scarcely received any alteration since the time of Calvin, is now in agitation. In a word, all things seem at present to conspire for the general good; and it is to be hoped that both parties, shocked at the recollection of past troubles, will continue on as friendly terms as the jealous nature of a free constitution will admit; and not exhibit any more civil dissensions of such notoriety as to endanger the ruin of the republic; dissensions which have been hitherto, perhaps, almost unavoidable, but which, if renewed in future, will stamp indelible disgrace on the Genevans, as restless and unquiet spirits.

